

## Micro<sup>X</sup> II



### Functional Specifications

|                                       |  |
|---------------------------------------|--|
| RF air protocol                       | EPC Class 1 Gen 2; ISO18000-6C               |
| Operating frequency                   | UHF 902-928 MHz (US); 866-868 MHz (EU)       |
| IC type                               | Alien Higgs-3                                |
| Memory configuration                  | 96-bit EPC ; 512-bit user memory; 64-bit TID |
| Functionality                         | Read / write (user programmed)               |
| Memory – expected read / write cycles | 100,000 cycles at 77°F (25°C)                |
| Data retention                        | Up to 50 years <sup>1</sup>                  |
| Read rate                             | 400 tags per second for 96-EPC bit number    |
| Warranty (limited)                    | 1 year                                       |

### Performance Characteristics

|   |                    |
|---|--------------------|
| Read range on metal (2W ERP) <sup>2</sup> | Up to 33 ft (10 m) |
| Polarization                              | Linear             |

### Physical Specifications

|                 |   |
|-----------------|---|
| Material        | Engineering-grade nylon polymer                     |
| Mounting system | Rivet hole, ø 0.12 in (3.2 mm); adhesive (optional) |
| Color           | Charcoal  |

### Environmental and Industry Compliance

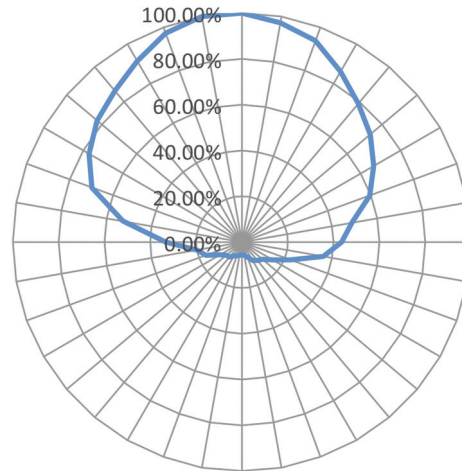
|      |                         |
|------|-------------------------|
| RoHS | EU Directive 2002/95/EC |
| ATEX | ATEX Compliant          |



<sup>1</sup> The chip data retention is based on chip operating under general environment conditions.

<sup>2</sup> Actual read range may vary based upon use case and antenna power.

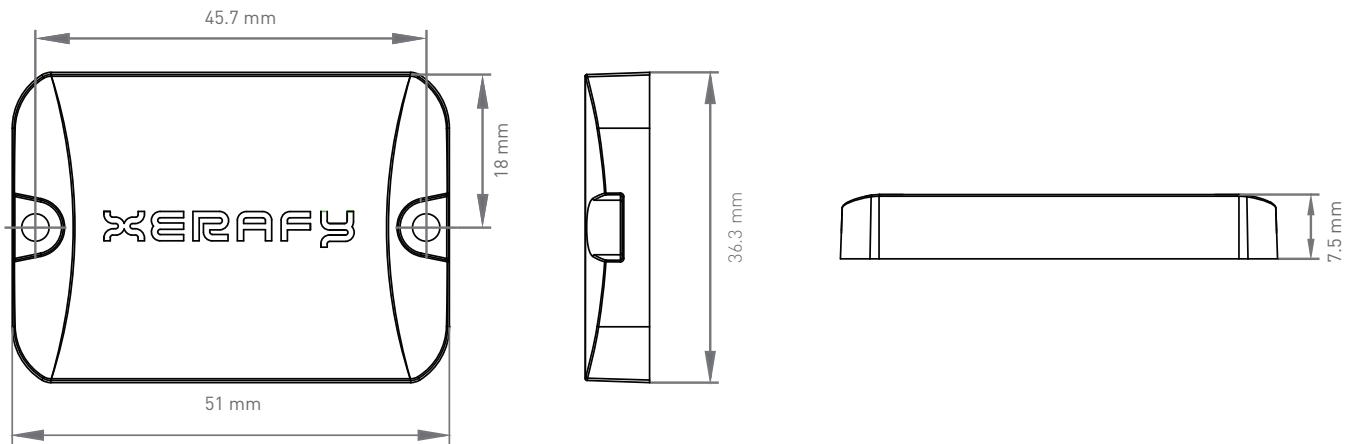
## Radiation Pattern



## Operational and Environmental Specifications

|  |   |
|--|---|
| Operational temperature                |   |
| Cold                                   | -22°F (-30°C)                                   |
| Dry heat (Long term, days/weeks/years) | +185°F (+85°C)                                  |
| Thermal shock                          | -22°F to 185°F (-30°C to +85°C); cycled         |
| Application temperature                |   |
| Cold                                   | -40°F (-40°C)                                   |
| Dry heat (Short term, minutes/hours)   | +482°F (+250°C)                                 |
| Humidity                               |   |
| Operational humidity                   | 5%-95% non-condensing                           |
| Storage humidity                       | 5%-95% non-condensing                           |
| Chemical resistance                    |   |
| Isopropyl alcohol                      | 48 hours  |
| Industrial cleaner                     | 48 hours  |
| Epoxy resin coolant                    | 48 hours  |
| Industrial rust lubricant              | 48 hours  |
| Acetone                                | 48 hours  |
| Salt water (15% salinity)              | 168 hours                                       |
| Sodium Hydroxide (10% pH 13)           | 168 hours                                       |
| Sulfuric acid (10%, pH 2)              | 168 hours                                       |
| Engine oil                             | 168 hours                                       |
| Gasoline                               | 48 hours  |
| Diesel fuel                            | 48 hours  |
| Soap solution (30%)                    | 48 hours  |
| Carboxylic acids                       | Testing recommended                             |
| Shock (drop)                           | 3 ft (1 m) to concrete/granite up to 200 cycles |
| Vibration                              | MIL-STD-810F                                    |
| Compression strength                   | 181 psi (1250 kPa)                              |
| IP classification                      | IP68  |

**Product Dimensions and Weight**



|                     |                                    |
|---------------------|------------------------------------|
| Dimensions (mm)     | 51 x 36.3 x 7.5                    |
| tolerance           | +/- 0.5 mm                         |
| Dimensions (in)     | 2.01 x 1.43 x 0.30                 |
| tolerance           | +/- 0.02 in                        |
| Rivet hole diameter | 0.126 in +/-0.008 (3.2 mm +/- 0.2) |
| Weight              | 0.92 oz (26 g)                     |

**Order information**

|                |              |
|----------------|--------------|
| X1130-US100-H3 | Micro XII US |
| X1130-EU100-H3 | Micro XII EU |