

## KEY DATA

Chip: Higgs-3  
Antenna Size: 115 × 3 mm  
Format: Dry Inlay, Wet Inlay,  
White Paper

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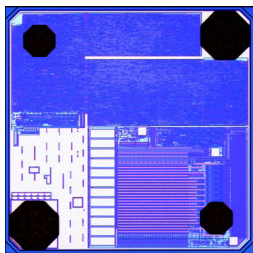
**RS-HY1153H3-2**

## APPLICATION

Logistics Clothing  
Supply Chain Management  
Product Authentication



## OVERVIEW



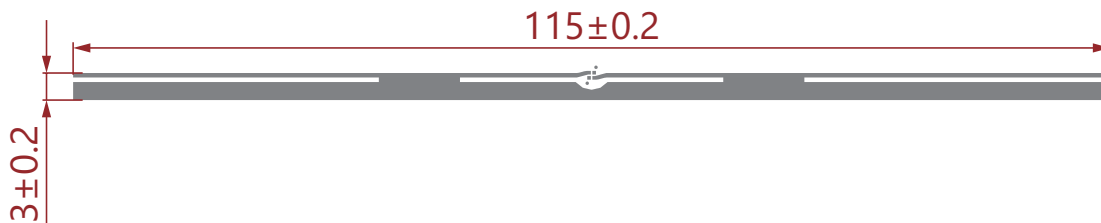
RS-HY1153H3-2 UHF RFID Dry Inlay is built with Alien Higgs-3.

Higgs-3 operates at extremely low power levels, yet still provides sufficient backscatter signal to read tags at an extended range. It can also be programmed at low RF power and, in conjunction with a custom command - LoadImage - can be programmed at high speed. Higgs-3 is implemented in a low cost CMOS process and uses proven and cost effective EEPROM technology.

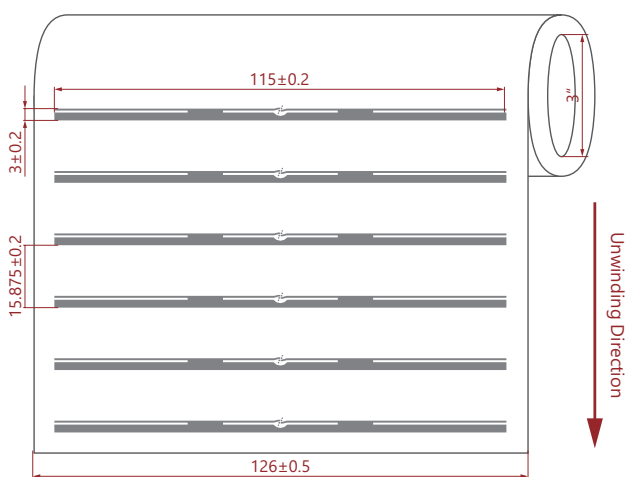
Higgs-3 offers a flexible memory architecture that provides for the optimum allocation of EPC and User memory for different use cases such as legacy part numbering systems and service history. User memory can also be read and or write locked on 64-bit boundaries, supporting a variety of of public/private usage models.

The IC also features a factory programmed 64-bit serial number that cannot be altered. In conjunction with the EPC code, this provides a unique "fingerprint" for the tagged item.

## DIMENSIONS



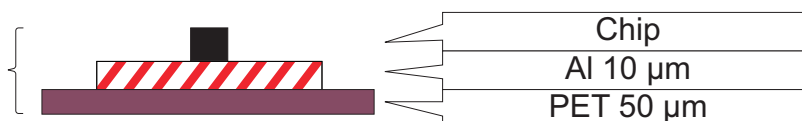
## ORIENTATION



| Physical characteristics | Dimensions  |
|--------------------------|---|
| Antenna size             | 115 × 3 mm  |
| Inlay pitch              | 15.875 mm   |
| PET width                | 126 mm  |
| Dry Inlay thickness      | Al 10 μm + PET 50 μm  |
| Reel detail              | Web width: 126 ± 1.0 mm<br>Inner core diameter: 3"<br>(76.2 mm)<br>Core thickness: 5 ± 2 mm |

## STRUCTURE

Dry inlay



## ELECTRICAL CHARACTERISTICS

| Item                 |          | Description  |
|----------------------|----------|--|
| Manufacture/IC       |          | Alien Higgs-3  |
| Base Material        |          | PET  |
| Antenna              |          | Etched Al (10 μm) + PET (50 μm)                      |
| Protocol             |          | ISO/IEC 18000-6C / EPC global Class 1 Gen 2          |
| Memory               | EPC      | 96 ~ 480 bits  |
|                      | User     | 512 bits   |
|                      | TID      | 64 bits  |
|                      | Reserved | Kill Password - 32 bits<br>Access Password - 32 bits |
| Frequency            |          | 860 ~ 960 MHz  |
| Operating Mode       |          | Passive  |
| IC Life              |          | 100,000 Programming cycles, 50 years data retention  |
| ESD Voltage Immunity |          | Max. 2000 V  |

## ENVIRONMENTAL REQUIREMENT

- Operating Temperature/Humidity: -5°C ~ 60°C / 20% ~ 80% RH
- Storage Temperature/Humidity: 20°C ~ 30°C / 20% ~ 60% RH
- Shelf Life: From the date of manufacture, 1 year in anti-static bag at 20°C ~ 30°C / 20% ~ 60% RH, and avoid direct sunlight exposure

## PACKAGING

Reference Packing: Static-free bag with zipper; 15000 ± 100 Pcs/roll, 4 rolls/ctn (Actual Qty as per Shipping Mark).

