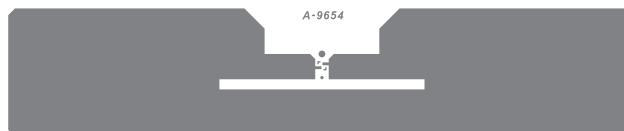


# DATASHEET

**RS-HYA-9654H3-2**  
UHF RFID Dry Inlay

## KEY DATA

Chip: Higgs-3  
Antenna Size: 93 × 19 mm  
Format: Dry Inlay, Wet Inlay,  
White Paper

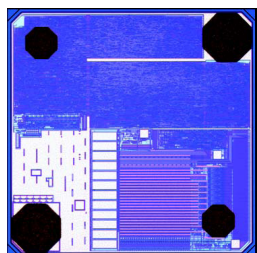


**RS-HYA-9654H3-2**

## APPLICATION

Logistics Clothing  
Supply Chain Management  
Product Authentication

## OVERVIEW



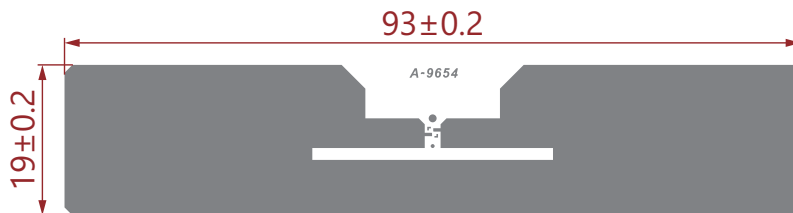
RS-HYA-9654H3-2 UHF RFID Dry Inlay is built with Alien Higgs-3.

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.

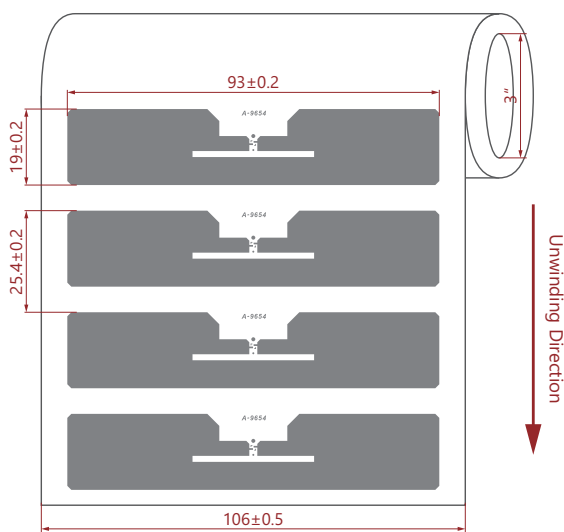
Higgs-3 offers a flexible memory architecture that provides for the optimum allocation of EPC and User memory for different use cases such as legacy part numbering systems and service history. User memory can also be read and or write locked on 64-bit boundaries, supporting a variety of of public/private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

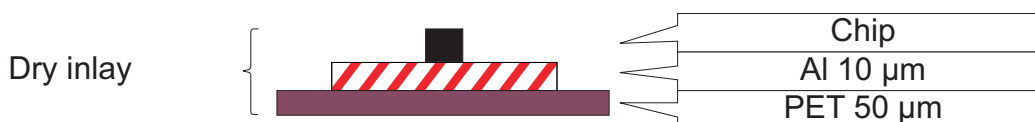


## ORIENTATION



Physical characteristics	Dimensions
Antenna size	93 × 19 mm
Inlay pitch	25.4 mm
PET width	106 mm
Dry Inlay thickness	Al 10 μm + PET 50 μm
Reel detail	Web width: 106 ± 1.0 mm Inner core diameter: 3" (76.2 mm) Core thickness: 5 ± 2 mm

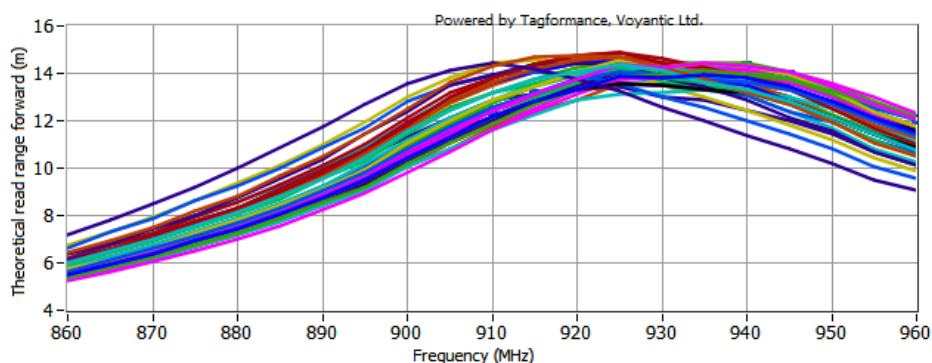
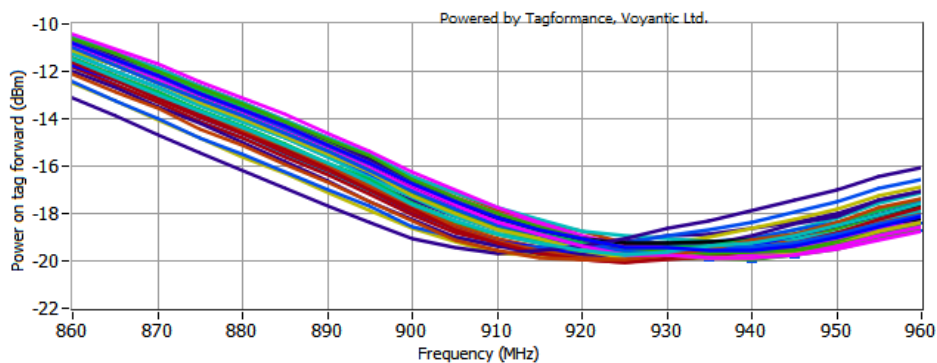
## STRUCTURE



## 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 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

## TAG FORMANCE



# DATASHEET

**RS-HYA-9654H3-2**  
UHF RFID Dry Inlay

## 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; 10000 ± 100 Pcs/roll, 4 rolls/ctn (Actual Qty as per Shipping Mark).

