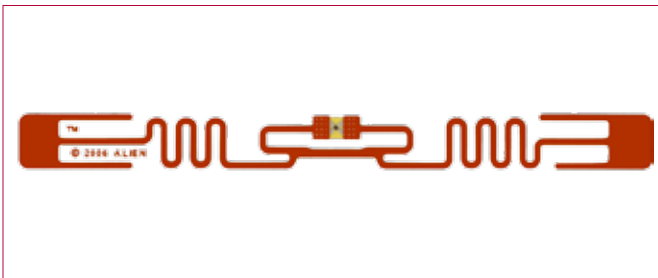




ALN-9640 Squiggle® Inlay

The Alien Technology® ALN-9640 Squiggle® Inlays are general purpose RFID inlays optimized for use in pallet and case tagging applications.



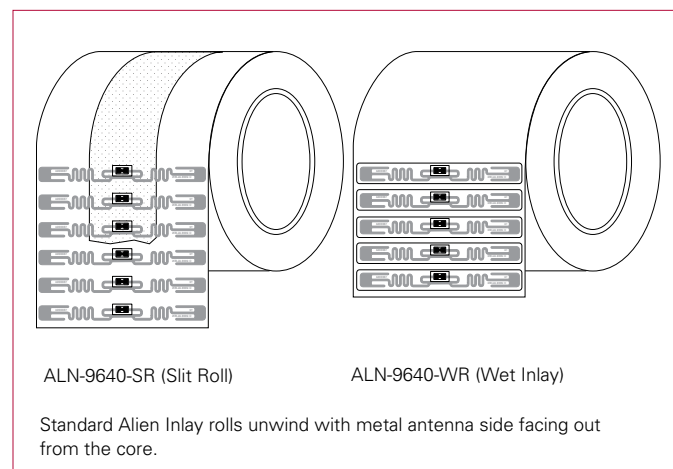
Features

- › Meets EPC global Gen 2 (v 1.2.0) as well as ISO/IEC 18000-6C
- › Worldwide operation in the RFID UHF bands (860-960MHz)
- › Higgs™-3 IC with 800-bits of NonVolatile Memory
 - 96 EPC bits, extensible to 480-bits
 - 512 User bits
 - 64-bit Unique TID
 - 32-bit Access and 32-bit Kill passwords
- › Pre-programmed with a unique, unalterable 64-bit serial number
- › User Memory can be Block Perma-Locked as well as read password protected in 64-bit blocks
- › Supports all Mandatory and Optional Gen 2 Commands including Item Level
- › Custom Commands for high speed programming
- › Exceptional Operating Range
- › Available in high-yield, high-capacity dry/wet inlay rolls for high volume converting processes

Based on Alien®'s break-through Higgs™-3 UHF RFID IC and innovative Squiggle antenna design, the ALN-9640 delivers industry leading EPC Gen 2 range and reliability at competitive prices. ALN-9640 inlays are also World Tag compliant, enabling inlays that operate consistently across the diverse frequencies of the Americas, Europe, Middle East, Asia, and Africa.

The Squiggle (ALN-9640) is one of the first members of Alien's new family of Higgs™-3 powered UHF RFID inlays. It, along with the Squiggle-SH (ALN-9662), deliver the unprecedented performance and features of Alien's new IC in the industry's most popular form factors – the Squiggle and its 3 inch label sibling, the Squiggle-SH.

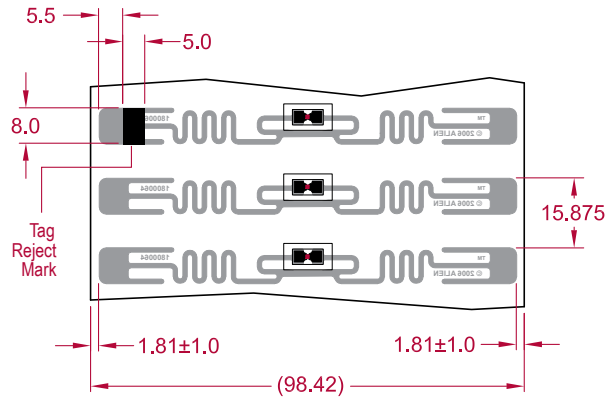
With its Higgs-3 core, the Squiggle provides 512-bits of user memory for applications requiring local data storage, and an extensible EPC number for alternative industry standard and legacy part numbering schemas. The inlay also features a unique 64-bit TID for use in product authentication and serialization applications, read/write password support to prevent unauthorized viewing/modification of the tag's data, and even better performance than its Higgs-2 powered predecessor – the ALN-9540 Squiggle.



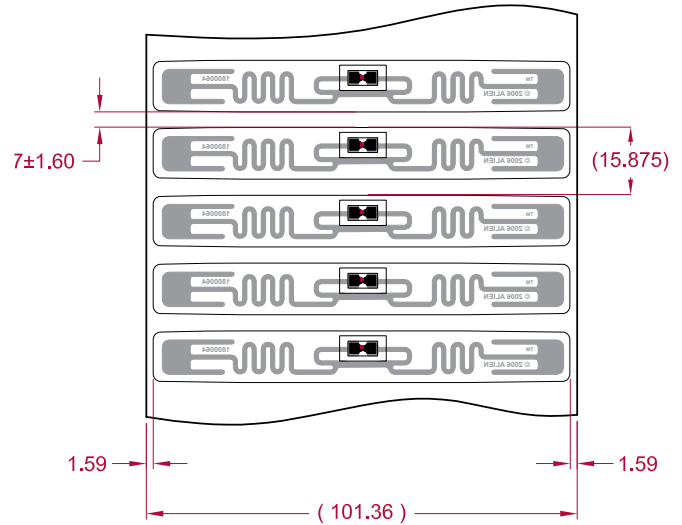


ALN-9640 Squiggle® Inlay

ALN-9640 Dry Inlay Specifications

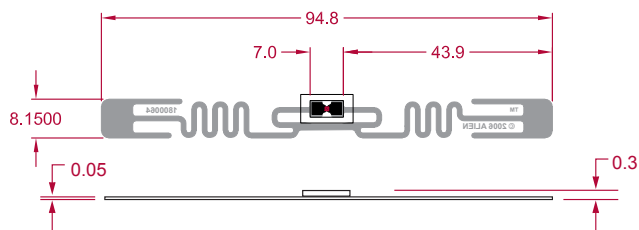


ALN-9640-SR (Slit Roll)

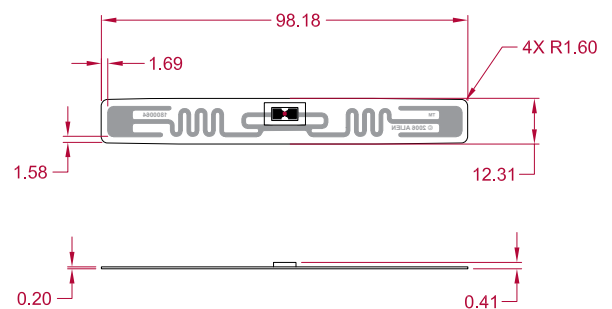


ALN-9640-WR (Wet Inlay)

ALN-9640 Inlay General Dimensions



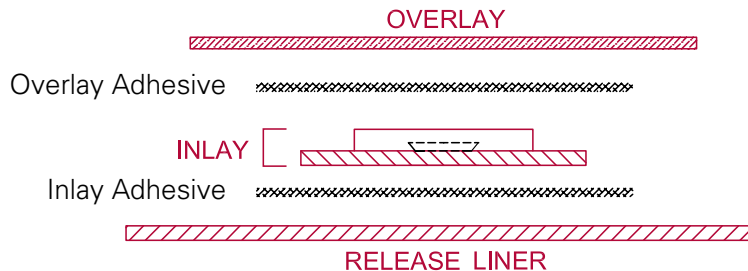
ALN-9640-SR (Slit Roll)



ALN-9640-WR (Wet Inlay)

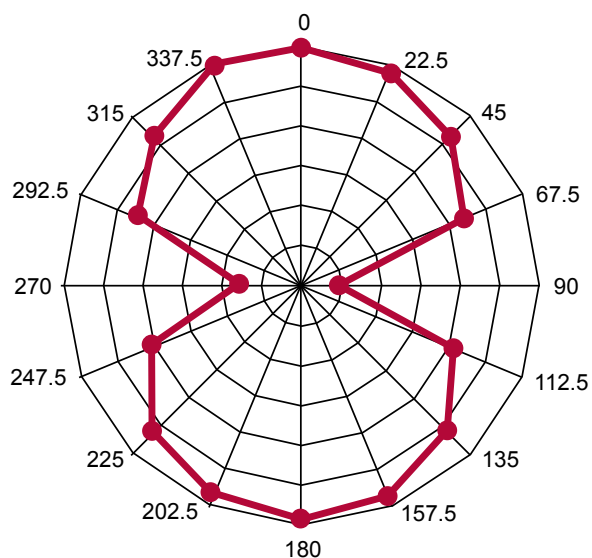


ALN-9640 Wet Inlay Construction

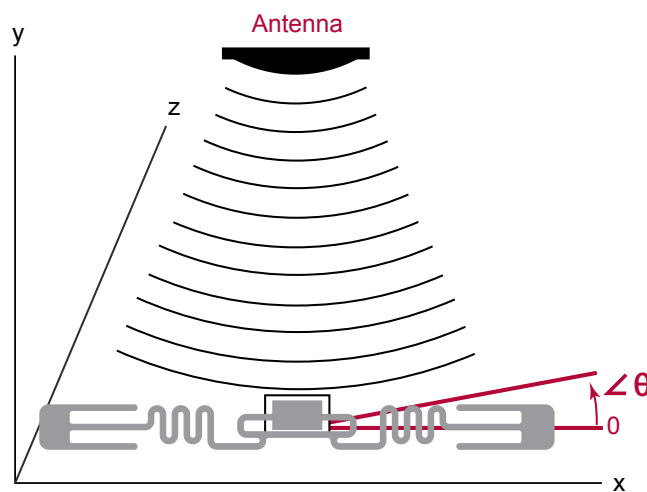


ALN-9640 Inlay Sensitivity & Orientation

World Tag Angular Sensitivity (dB vs. Angle Position)

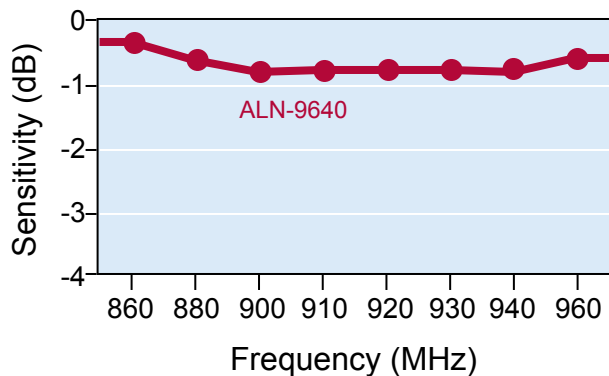


World Tag Relative Orientation
Inlay is rotated in the x, y, plane about the z axis



On-Product Performance Information

Frequency Response in Air
Suitable for Global Use





ALN-9640 Squiggle® Inlay

ALN-9640 Specifications

Dry Inlay

Antenna Width	94.8mm
Antenna Length	8.1mm
Web Width	98.4mm
Web Pitch	15.875mm
Core Width	98.4mm
Core ID	152.4mm
Core Material	Fiberboard
Interleaf Material	Paper
Interleaf Width	38.1mm
Inlays per Roll	20,000 Nominal
Maximum Roll OD	< 406.4mm
Roll Labeling Data	Roll #, Quantity

Wet Inlay

Inlay Width	98.2mm
Inlay Length	12.3mm
Web Width	101.4mm
Web Pitch	15.875mm
Core Width	120.7mm
Core ID	152.4mm
Core Material	Fiberboard
Inlays per Roll	20,000 Nominal
Maximum Roll OD	< 406.4mm
Roll Labeling Data	Roll #, Quantity
Overlay	2.5 Mil White Polyolefin
Overlay Adhesive	Acrylic Emulsion
Inlay Adhesive	Rubber Based
Adhesive Application Temperature	> +2°C
Adhesive Service Temperature	-20°C to +93°C
Release Liner	40# SCK

Environmental

Shelf Life	2 Years
Recommended Storage	+25°C / 40% RH
Storage Limits	-25°C to +50°C 20% to 90% RH Non-condensing
Operating Limits	-40°C to +70°C 20% to 90% RH Non-condensing
Bend Diameter	> 50mm
Pressure	< 5N/mm ²
Drop Resistance	Per ASTM D5276
Write Cycles	10,000
RoHs	2002/95/EC Compliant
ESD – HBM / CDM	> 5.0kV / > 1.5kV

RFID

ISO/IEC 18000-6C	
EPC Class 1 Gen 2	
Integrated Circuit	Alien Higgs-3
EPCglobal Certificate	950110126000001084
Operating Frequency	840–960 MHz
EPC Size	96–480 Bits
User Memory	512 Bits
Unique TID	64 Bits
Access Password	32 Bits
Kill Password	32 Bits

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