ALN-9627 "H" Inlay

The Alien Technology® ALN-9627 "H" RFID inlay is a general purpose inlay for small tickets and hang tags.

Powered by Alien®'s break-through **Higgs™3** UHF RFID IC and innovative **"H"** antenna design, the ALN-9627 delivers industry leading EPC Gen 2 performance in a form factor suitable for **small vertical labels and hang tags**, which makes it ideal for apparel and small label applications.

With its Higgs-3 core, the **"H"** delivers excellent performance and a rich feature set expanding the standard 32-bit TID with an **additional 64-bit Unique TID for authentication** and serialization applications, an **extensible EPC memory bank, 512-bits of user memory** for distributed data applications and **password protected read and write support capabilities** to prevent unauthorized viewing and modification of the tag's data.

ALN-9627 inlays are *World Tag* compliant, enabling consistent operation across the diverse frequencies of the Americas, Europe, Middle East, Asia, and Africa.

Typical applications for the "H" include, but are not limited to:

- ➢ apparel, hang tags
- ➢ corrugate cases
- ➢ small package labels
- ➢ shipping labels
- ➢ asset management
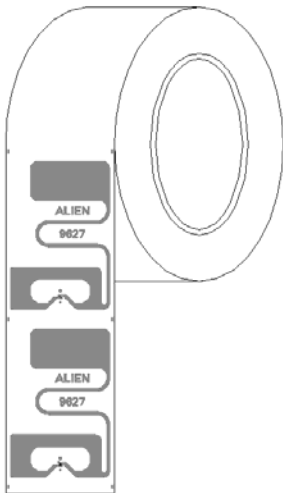- ➢ file folder labels

FEATURES

- › Exceptional performance
- › EPC Gen 2 (v1.2.0) compliant
- › ISO/IEC 18000-6C compliant
- › Worldwide RFID UHF operation (840-960MHz)
- › Higgs™-3 IC with 800-bits of Nonvolatile Memory
    - – 32-bit TID
    - – 64-bit Unique TID
    - – 96-bit EPC Memory, extensible to 480-bits
    - – 512-bit User Memory
    - – 32-bit Access password
    - – 32-bit Kill password
- › Pre-programmed with a unique, unalterable 64-bit serial number (ideal for authentication)
- › User Memory can be Block Perma-Locked
- › User Memory can be Read Password protected in 64-bit blocks, prohibiting unintended Reads without an access password
- › Supports all Mandatory and Optional Gen 2 commands including item level commands
- › Custom commands for high speed programming
- › Available in high-yield, high-capacity dry/wet inlay rolls for high volume converting processes
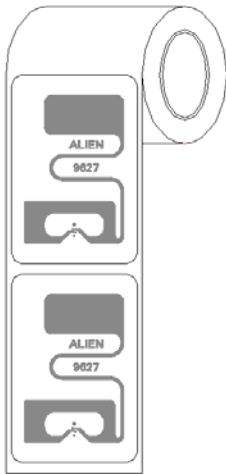
ALN-9627 Inlay Orientation

ALN-9627-FSR
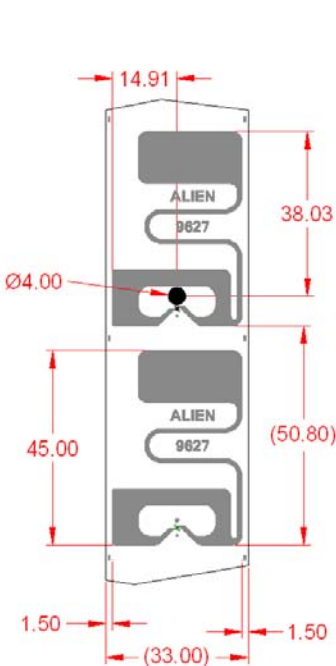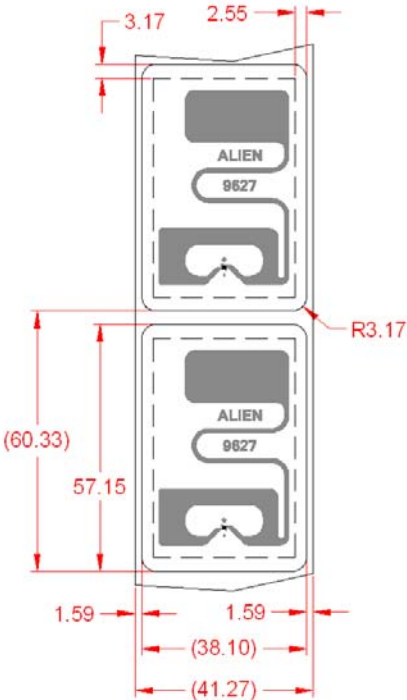
(Dry Unslit Roll)

ALN-9627-FWRW

(White Wet Roll)

Standard Alien Inlay rolls unwind with metal antenna side facing outward with respect to the core.

ALN-9627 Inlay Specification

ALN-9627-FSR

(Dry Unslit Inlay)

ALN-9627- FWRW

(White Wet Inlay)

ALN-9627 Inlay Stackup

DRY INLAY THICKNESS, ±10%	
OVER ANTENNA	0.05 mm
OVER CHIP	0.25 mm

WHITE WET INLAY THICKNESS, ±10%	
OVER ANTENNA	0.16 mm
OVER CHIP	0.36 mm

OVERLAY

ADHESIVE

INLAY

INLAY
ADHESIVE
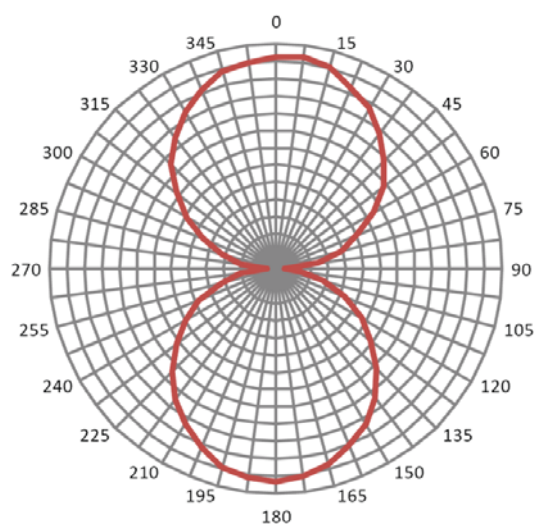RELEASE LINER
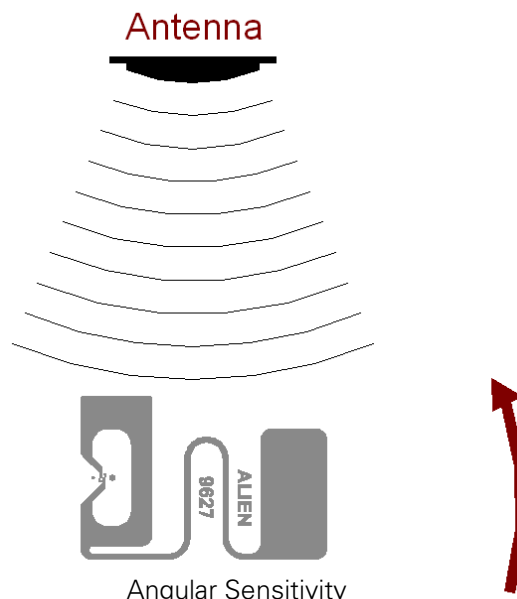
ALN-9627-FSR
(Dry Unslit Inlay)

ALN-9627-FWRW
(White Wet Inlay)

ALN-9627 Inlay Angular Sensitivity

Antenna

Angular Sensitivity
(Relative Read Range vs. Orientation)

Angular Sensitivity
Inlay is rotated in the x, y, plane about the z axis
(tag shown at 0° with respect to face of antenna)

ALN-9627 Specifications

Dry Inlay

Antenna Width	1.18″ [30.0mm]
Antenna Length	1.77″ [45.0 mm]
Web Width (FSR)	1.30″ [33.0mm]
Web Pitch	2.00″ [50.8mm]
Core Width (FSR)	1.30″ [33.0mm]
Core ID	6″ [152.4mm]
Core Material	Fiberboard
Interleaf Material	N/A
Interleaf Width	N/A
Inlays per Roll	8,000 Nominal
Maximum Roll OD	< 12″ [304.8mm]
Roll Labeling Data	Roll #, Quantity

Wet Inlay

Inlay Width	1.5″[38.1mm]
Inlay Length	2.25″ [57.15mm]
Web Width (FWRW)	1.625″ [41.27 mm]
Web Pitch	2.375″ [60.33]
Core Width	1.625″ [41.27mm]
Core ID	3″ [76.2mm]
Core Material	Fiberboard
Inlays per Roll	2,000 Nominal
Maximum Roll OD	< 16″ [406.4mm]
Roll Labeling Data	Roll #, Quantity
White (-FWRW)	TT Printable Paper
Overlay Adhesive (-FWRW)	General Purpose Permanent
Inlay Adhesive	General Purpose Permanent
Adhesive Application Temperature	> +36.5°F [+2°C]
Adhesive Service Temperature	-4°F to +199.4°F [-20°C to +93°C]
Release Liner	40# SCK

Environmental

Shelf Life	2 Years at +77°F [+25°C] @ 40%RH
Recommended Storage	+77°F [+25°C] @ 40% RH
Storage Limits	-13°F to 122°F [-25°C to +50°C] 20% to 90% RH Non-condensing
Operating Limits	-40°F to +158°F [-40°C to +70°C] 20% to 90% RH Non-condensing
Bend Diameter	> 1.97″ [50mm]
Pressure	< 5N/mm^2
Drop Resistance	Per ASTM D5276
Write Cycles	100,000 at 25°C
RoHs	2002/95/EC Compliant
ESD – HBM / CDM	> 5.0kV / > 1.5kV

RFID

ISO/IEC 18000-6C	
EPCglobal 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
TID	32 Bits
Unique TID	64 Bits
Access Password	32 Bits
Kill Password	32 Bits