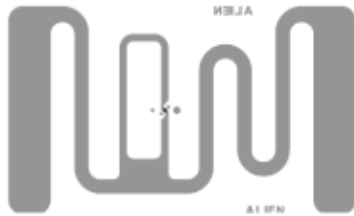




# ALN-9728-35 (RE-PITCHED) “GT” GARMENT TAG INLAY

The Alien Technology® ALN-9728-35 “GT” is a 30mm x 50mm RFID inlay specifically designed for high read performance in the retail and apparel markets. This tag has a form-factor especially suitable for hang-tags.



### Applications

- Retail
- Apparel
- Hang-tags
- Joker tags
- Labels
- Document tracking

FEATURE	DESCRIPTION	BENEFIT
30mm x 50mm form-factor	Designed to fit the form-factor and everyday retail use cases where items are tightly packed on shelves or hangers	Extremely high read-rates in real-life, every day retail environments
Tuned for use in retail environments with packed shelves or hanging garments		
Next generation Higgs™ 4 features and performance	A mass-market optimized tag with class leading read and write performance. Supports Aliens <i>QuickWrite™</i> and <i>BlastWrite™</i>	Rapid programming of serialized tags and excellent read/write performance

### Features:

- › Designed to meet EPCglobal Gen2 (V1.2.0) and ISO/IEC 18000-6C
- › Worldwide operation in the RFID UHF bands (840-960 MHz)
- › 448-Bits of NVRAM Memory
  - 128-EPC Bits
  - 128 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 32 Bit Blocks
- › Class leading read and write performance
- › *BlastWrite™* and *QuickWrite™* mass-encoding
- › Dynamic Authentication™ - anti-cloning/anti-counterfeit technology
- › Exceptional operating range, up to 11m with appropriate antenna.
- › Available in high-yield, high capacity dry/wet inlay rolls

### Product Overview:

Powered by Alien®’s break-through **Higgs™ 4 UHF RFID IC** and **innovative “GT” antenna design**, the ALN-9728-35 delivers industry leading EPC Gen 2 performance and reliability for retail and apparel applications where items are tightly packed on shelves or hangers.

With its Higgs-4 core, the “GT” delivers next generation read and write performance, yet is completely **optimized for the highest volume enterprise, retail, and automotive applications.**

An optimized memory footprint includes a 32-bit TID, a **64-bit Unique TID for authentication** and **next generation serialization** applications, a 128-bit EPC memory bank, 128-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-9728-35 inlays are World Tag compliant, enabling consistent operation across the diverse frequencies of the Americas, Europe, Middle East, Asia, and Africa.

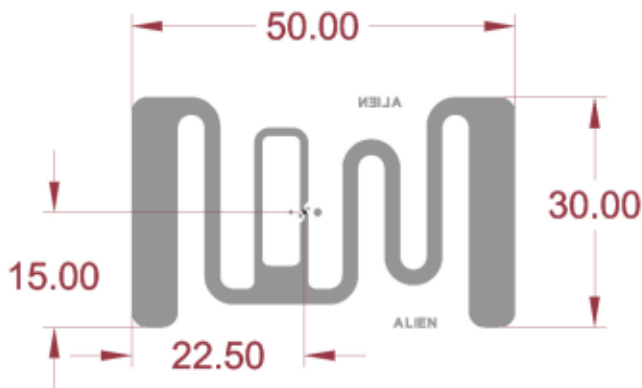




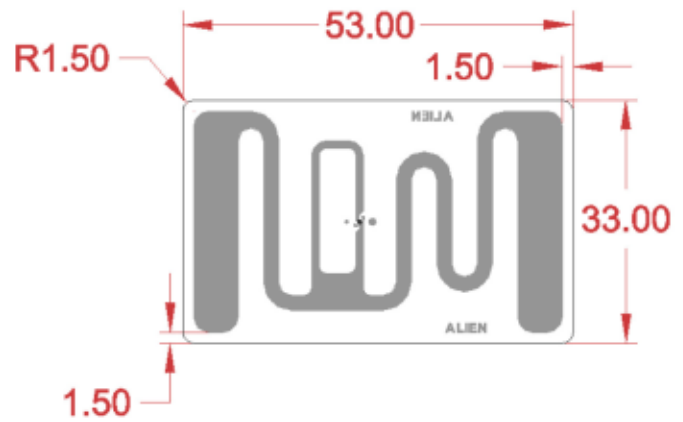
## ALN-9728-35 "GT" Garment Tag Inlay (Re-Pitched)

All dimensions in millimeters unless specified otherwise

### ALN-9728-35 Basic Dimensions

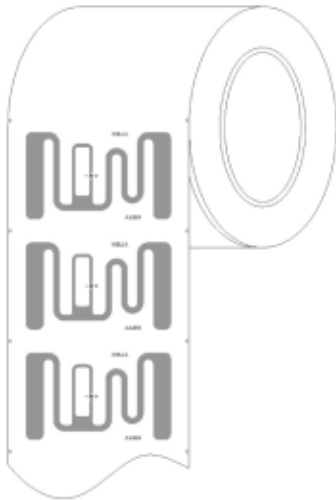


ALN-9728-35 Dry

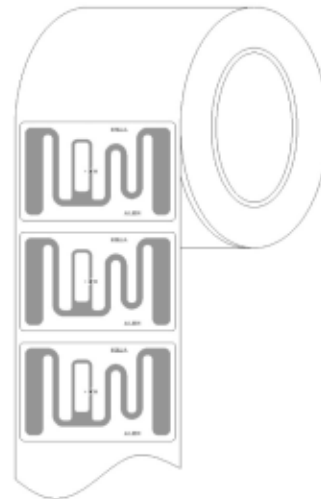


ALN-9728-35 Wet

### ALN-9728-35 Inlay Orientation



ALN-9728-35R (Dry Unslit Roll) and  
ALN-9728-35SR (Narrow Dry Unslit  
Roll)



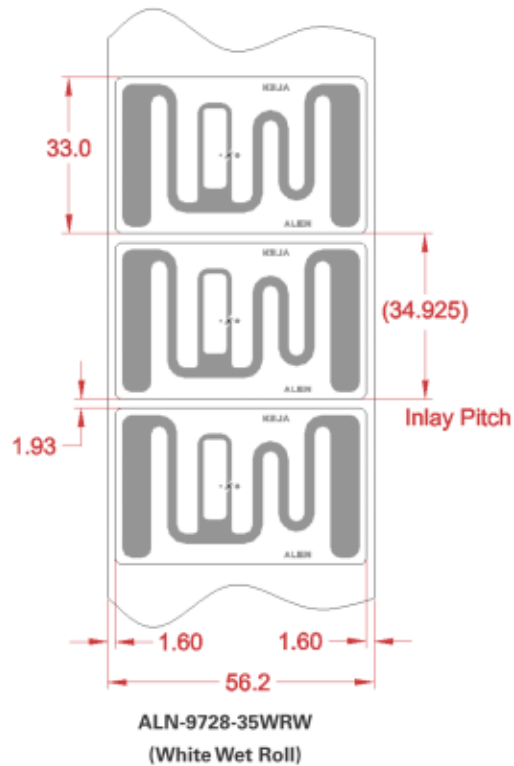
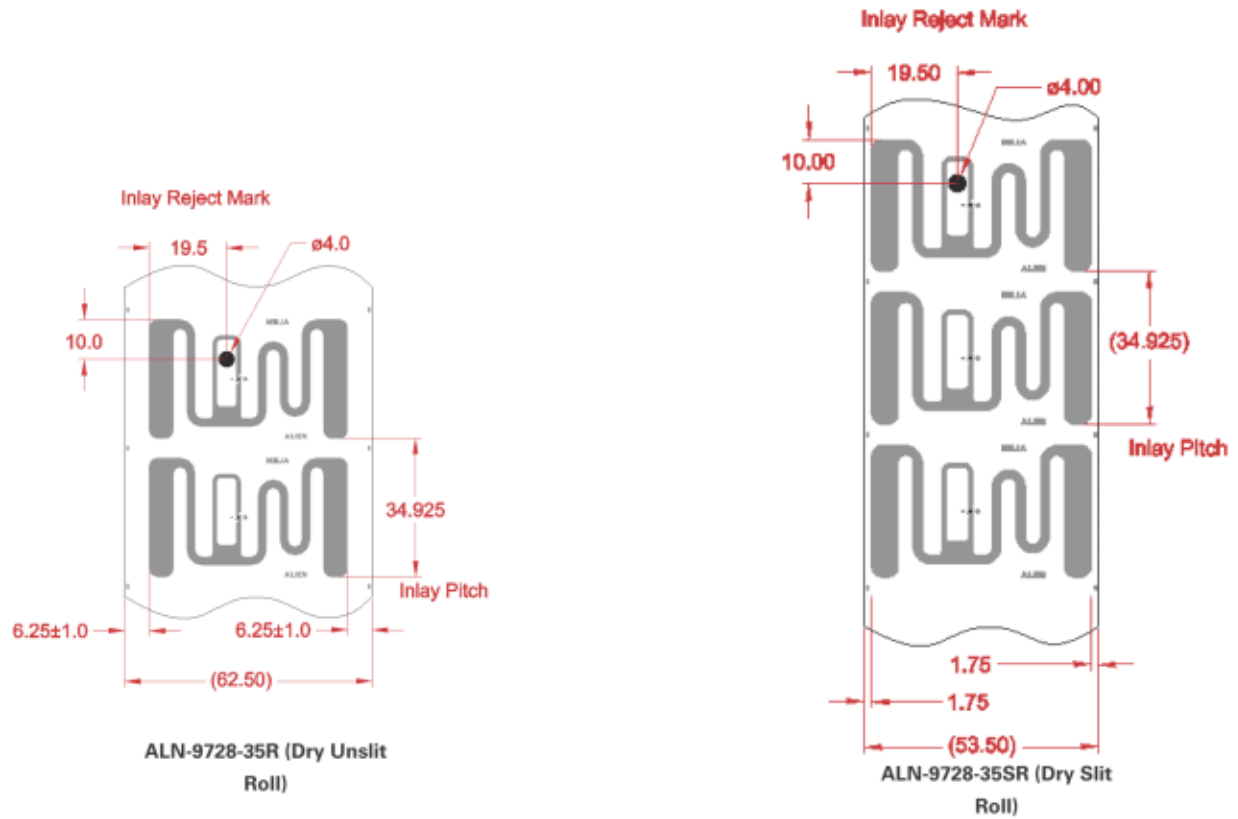
ALN-9728-35WRW  
(White Wet Roll)

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





ALN-9728-35 Inlay Specification





# ALN-9728-35 "GT" Garment Tag Inlay (Re-Pitched)

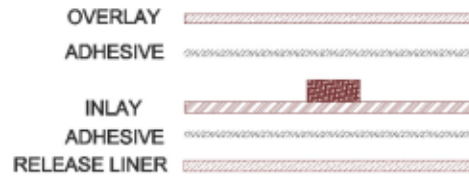
## ALN-9728-35 Inlay Stackup

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

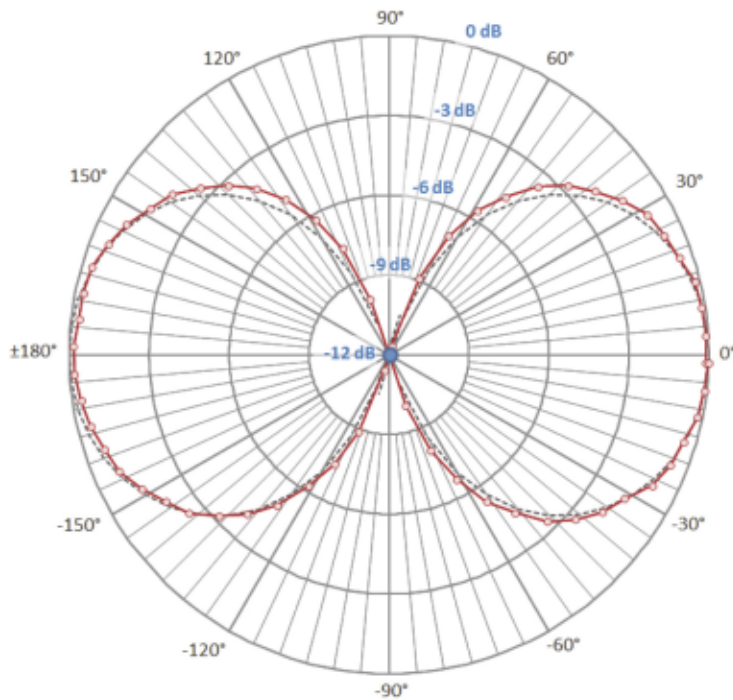


ALN-9728-35R (Dry Unslit Roll) and ALN-9728-35SR (Narrow Dry Unslit Roll)

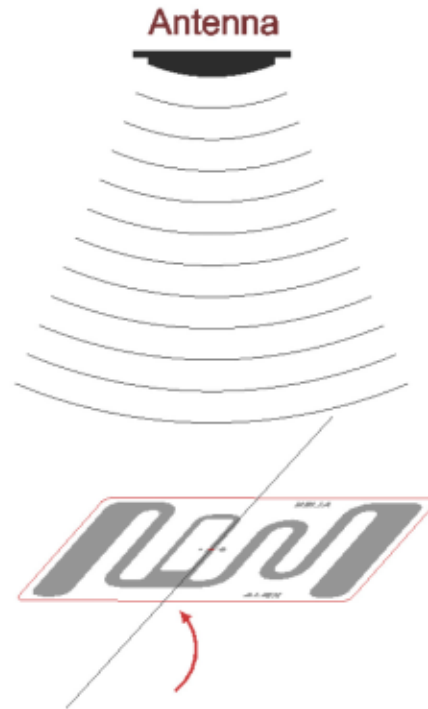


ALN-9728-35WRW (White Wet Roll)

## ALN-9728-35 Inlay Angular Sensitivity



Angular Sensitivity  
(Relative Read Range vs. Orientation)



Angular Sensitivity  
Inlay is rotated in the x, y, plane about the z axis



# ALIEN ALN-9728-35 "GT" Garment Tag Inlay (Re-Pitched)

## ALN-9728-35 Specifications

Dry Inlay	Non-Rotated ALN-9728-35R	Non-Rotated Narrow ALN-9728-35SR	Environmental
Antenna Width	1.97" [50mm]	1.97" [50mm]	Shelf Life
Antenna Length	1.18" [30mm]	1.18" [30mm]	
Web Width	2.46" [62.5mm]	2.11" [53.5mm]	Recommended Storage
Web Pitch	1.375" [34.92mm]	1.375" [34.92mm]	
Core Width	2.46" [62.5mm]	2.11" [53.5mm]	Storage Limits
Core ID	6" [152.4mm]*		
Core Material	Fiberboard		Operating Limits
Inlays per Roll	12,500 Nominal	14,000 Nominal	
Maximum Roll OD	< 12" [304.8mm]		Bend Diameter
Roll Labeling Data	Roll #, Quantity		

Wet Inlay	Non-Rotated ALN-9728-35WRW
Inlay Width	2.09" [53.0mm]
Inlay Length	1.30" [33.0mm]
Web Width	2.21" [56.2mm]
Web Pitch	1.375" [34.92mm]
Core Width	2.21" [56.2mm]
Core ID	6" [152.4mm]*
Core Material	Fiberboard
Inlays per Roll	12,500 Nominal
Maximum Roll OD	< 16" [406.4mm]
Roll Labeling Data	Roll #, Quantity
White	TT Printable White Film Only
Overlay Adhesive	General Purpose Permanent
Inlay Adhesive	General Purpose Permanent
Adhesive Application Temperature	> +25°F [-4°C]
Adhesive Service Temperature	-40°F to +200°F [-40°C to +93.3°C]
Release Liner	40# SCK

Shelf Life	Dry Inlays: 5 years at +77°F [+25°C] @ 40% RH
	Wet Inlays: 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 <sup>2</sup>
Drop Resistance	Per ASTM D5276
Write Cycles	100,000 @ 25°C
RoHs	2002/95/EC, 2005/618/EC, 2011/65/EU Compliant
REACH	1907/2006/EC Compliant (SVHC and ECHA)
ESD Limit- HBM / CDM	5.0kV / 1.5kV

RFID	
Protocols Supported	ISO/IEC 18000-6C EPCglobal Class 1 Gen 2
Integrated Circuit	Alien Higgs-4
Operating Frequency	840-960 MHz
EPC Size	128 Bits
User Memory	128 Bits
TID	32 Bits
Unique TID	64 Bits
Access Password	32 Bits
Kill Password	32 Bits

\* Shipped with 6" to 3" plastic core adapter

July 5, 2015

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 HANDLING PRECAUTIONS Observe standard handling practices to minimize ESD.  
 DISCLAIMER Application recommendations are guidelines only - actual results may vary and should be confirmed. This is a general purpose product not designed or intended for any specific application.

This product is covered by one or more of the following U.S. patents: 7967204, 7931083, 7885766, 7737825, 7716208, 7716180, 7689236, 7658822, 7619331, 7615479, 7598867, 7588378, 7576656, 7562883, 7561221, 7559486, 7559131, 7554451, 7551141, 7542301, 7542086, 7531218, 7529165, 7508603, 7489246, 7453765, 7428497, 7417286, 7411503, 7385284, 7377445, 7364884, 7335588, 7324861, 7321199, 7301458, 7285114, 7288422, 7265875, 7262086, 7260882, 7253735, 7244328, 7238527, 7214589, 7196527, 7194584, 7173528, 7172918, 7172789, 7141176, 7141250, 7101377, 7084444, 7078851, 7068224, 7048328, 6998644, 6989667, 6985361, 6981184, 6978219, 6952157, 6942155, 6933848, 6927885, 6816380, 6780696, 6731353, 6693364, 6683663, 6665044, 6657289, 6623578, 6606247, 6586079, 6580346, 6586338, 6580744, 6555105, 6527964, 6478399, 6468638, 6420286, 6316278, 6291896, 6281038. Other patents pending.

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