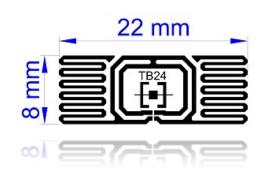


"TB24 RINGTRACE" Inlay

Produced by Trace-Tech Id Solutions S.L.

Tag for Near Field and Short Range Item level Tagging



Overview

The TB24 is optimized for short to medium range item level tracking, including pharmaceuticals, garments, and assets. Its design allows it to operate in the near field as well as short range far-field.

The TB24 features the Impinj Monza 4 chip, the Monza 4 family provides a variety of models to suit diverse applications, ushering in new standars in RFID privacy, tag orientation insensivity, best and most consistent read/write performance, and memory capability.

Communication Protocol and Memory Specifications

Wireless Communication Protocol EPC Gen 2, ISO 18000-6C, ISO/IEC 15963 (UID standard). Protocol Class 1. Component Used Impinj Monza 4

IC NAME	Monza 4D	Monza 4E	Monza 4QT
EPC MEMORY	128 bits	496 bits	128 bits
USER MEMORY	32 bits	128 bits	512 bits
SERIALIZED TID	32 bits	32 bits	32 bits
RESERVED MEMORY (password, kill)	64 bits	64 bits	64 bits
READ SENSIBILITY LIMIT	–18 dBm	–18 dBm	–18 dBm
WRITE SENSIBILITY LIMIT	−14,6 dBm	−14,6 dBm	−14,6 dBm

Features

- Optimized for item tracking in near-field and short range operation
- Enhanced anti-counterfeiting/anti-cloning capability.
- Applications include pharmaceuticals, jewellery management, and other assets.
- Aluminium inlay provides excellent performance at lower • costs than silver ink or copper; RoHS compliant

Functional Specifications

EPC Class 1 Gen 2 ISO/IEC 18000-6C

Operating Frequency Band:860 - 960 MHz

Read Range Typical ≥ 40cm with fixed reader and inlay mounted on cardboard Mode of Operation Passive, Backscattering Modulation

Environmental Specifications

Operating Temperature Range -40° C to +65° C at 40-80% RH Storage Temperature -40° C to +85° C at 40-80% RH Electrostatic Discharge (ESD) tolerance: 2.000V HBM (Human Body Model)



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Tag for Near Field and Short Range Item level Tagging

Dry Inlay Specifications

Substrate
Metal Layer
Pitch
Overall Inlay Thickness with IC

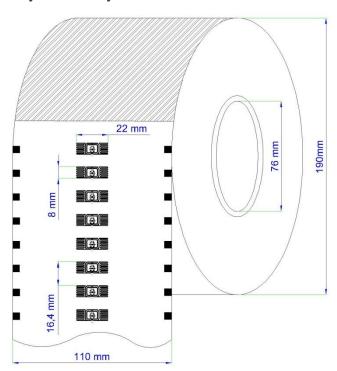
50 micron PET
Aluminum 99.8% pure
16.4224 mm
Max 210 μm
≥ 15mm, tension less than 6 N

Wet Inlay Specifications

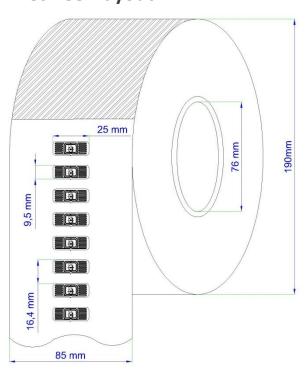
Die-cut size25x9.5 mmInlay AdhesiveAcrylicRelease linner40#SCKPitch16.4224 mm

Dry Reel Layout

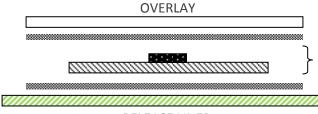
Bending Diameter



Wet Reel Layout



Wet Inlay or Labeltag Construction



Overlay Adhesive DRY INLAY = $50 \mu m$ PET + Monza4 die

Inlay Adhesive

RELEASE LINER

Customized solutions

Whatever size, material, shape and adhesive for:

- RFID Labeltags
- o RFID Tickets
- o RFID Hangtags
- o RFID PVC cards
- Printing & codifying service
- High volumes and low volumes









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