

Overview

The TH44 is optimized for far field applications, including logistic, and asset tracking. Its design allows it to operate in the long range (far-field).

The TH44 features the Impinj Monza 4 chip, the Monza 4 family provides a variety of models to suit diverse applications, ushering in new standards in RFID privacy, tag orientation insensitivity, 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 long range in far-field operation
- Enhanced anti-counterfeiting/anti-cloning capability.
- Applications include logistics, garments, 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 ≥ 6m with fixed reader
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)



“TH44 OMNI” Inlay

Produced by Trace-Tech Id Solutions S.L.
Tag for Far-Field and Long Range Item or pallet Tagging

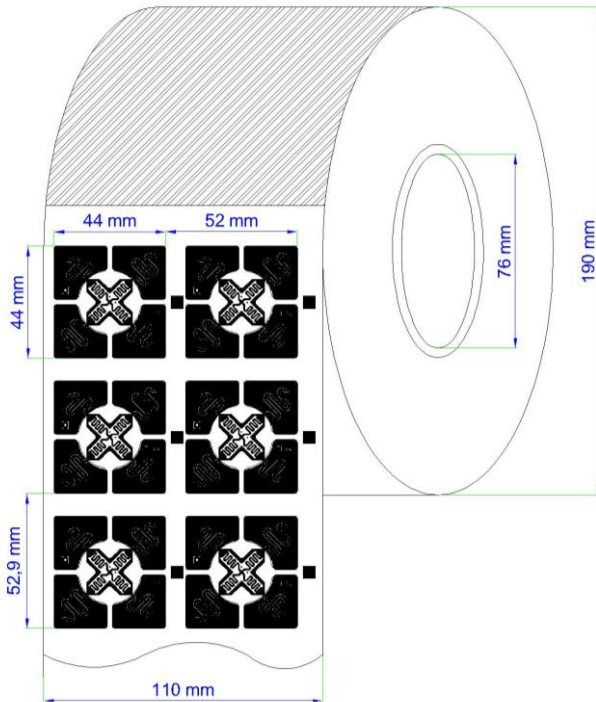
Dry Inlay Specifications

Substrate	50 micron PET
Metal Layer	Aluminum 99.8% pure
Pitch	52.9166 mm
Overall Inlay Thickness with IC	Max 210 µm
Bending Diameter	≥ 15mm, tension less than 6 N

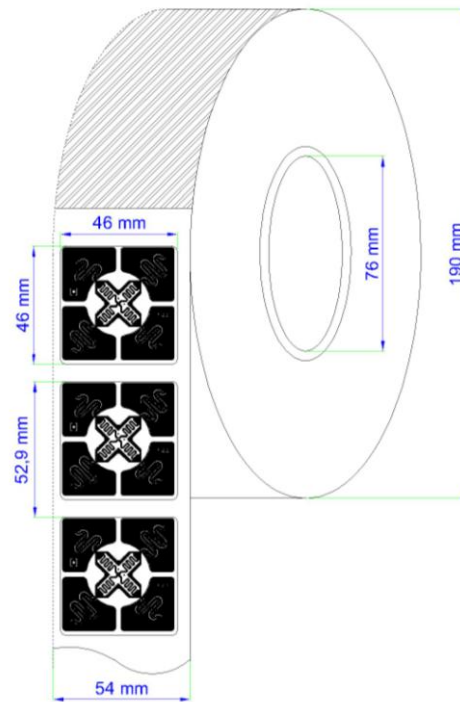
Wet Inlay Specifications

Die-cut size	46x46 mm
Inlay Adhesive	Acrylic
Release liner	40#SCK
Pitch	52.9166 mm

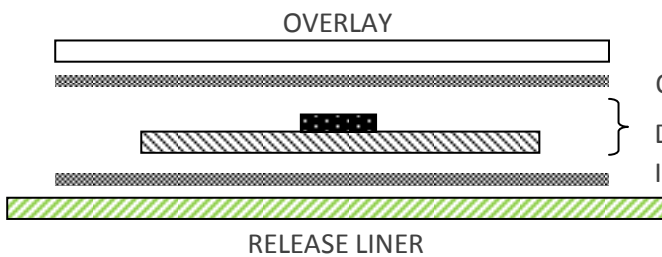
Dry Reel Layout



Wet Reel Layout



Wet Inlay or Labeltag Construction



Overlay Adhesive

DRY INLAY = 50 µm PET + Monza4 die
Inlay Adhesive

Customized solutions

Whatever size, material, shape and adhesive for:

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

