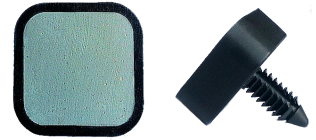




# EaT-101 Push Tag

Technologies ROI, LLC



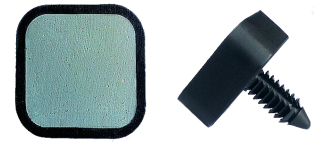
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## 1 PRODUCT DESCRIPTION

The patent-pending **TROI EaT-101** provides identification and tracking capabilities never-before available in such a tiny plastic package designed for rugged or hazardous use-areas. The EaT-101 was designed to be mounted to the surface of the part by pushing the mounting prong on the back of the tag into a 6 mm (0.236 inch) hole.

The tag is able to withstand extreme pressures and temperatures up to 200 degrees C.

### 1.1 SPECIFICATIONS

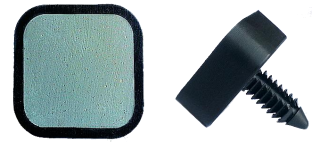
<b>Device type</b> Passive RFID tag	<b>Standard:</b> UHF (Ultra High Frequency band; 860MHz – 950MHz))
<b>Air interface protocol</b>	UHF: EPCGlobal Class1Gen2 / ISO/IEC 18000-6C
<b>Operational frequency</b>	<b>Standard:</b> UHF 865-869 MHz (EU), 902-928 MHz (US)
<b>IC options - UHF</b>	<b>Standard:</b> Impinj Monza 4
<b>EPC memory - UHF</b>	<b>Standard:</b> 128 bit
<b>EPC memory content</b>	Unique 96-bit number encoded
<b>Extended memory - UHF</b>	<b>Standard:</b> 512 bit
<b>TID - UHF</b>	Factory-programmed, non-changeable, unique 64-bit ID.
<b>Read range - UHF</b>	Real-world: 1 – 2 meters, depending on attachment Lab environment: 7 meters
<b>Applicable surfaces</b>	Any material Surface mounting on metal surfaces, both ferrous and non-ferrous
<b>Material</b>	High temperature plastic: Proprietary impact resistant filled nylon
<b>Weight</b>	20 grams
<b>Standards compliancy</b>	ISO 17665 – Sterilization of Health Care Products – Moist Steam ISO 11135 - Sterilization of Health Care Products – Ethylene Oxide ATEX-compliant
<b>Product RoHS compliant?</b>	Yes

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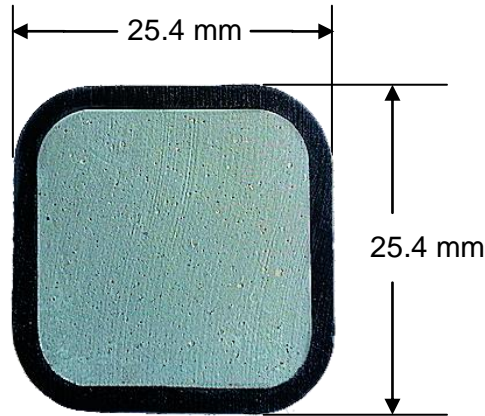
## 1.2 DIMENSIONS

**TAG ONLY:** 25.4 mm Long x 25.4 mm Wide x 10 mm High

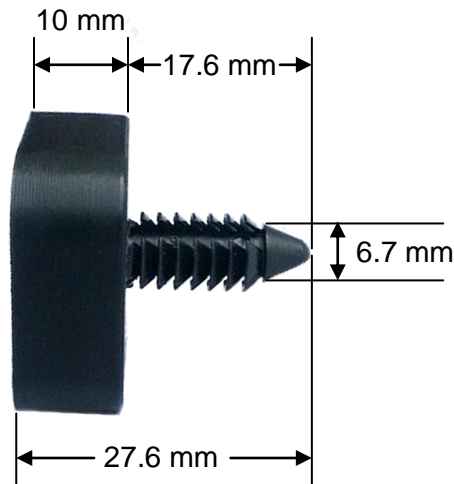
**TAG & MOUNTING PRONG:** 25.4 mm Long x 25.4 mm Wide x 27.6 mm High

NOTE: Pictures are not to scale

### PLAN VIEW



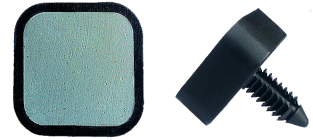
### PROFILE VIEW





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## 1.3 READ RANGE

	UHF Max read range on metal with 4W EIRP
<b>EaT-101</b> (915 MHz)	660.4 cm / 260 inches (6.63 m / 21.75 feet)

The read range listed above was obtained from a lab test environment. Actual test results may be different. Testing in actual use environments is strongly recommended.

## 1.4 ENVIRONMENTAL SPECIFICATIONS

<b>Operating temperature</b>	-50° C to +200° C* -50° F to + 392° F*
<b>Temperature Cycling Test</b>	200 deg C continuous, for 30 days
<b>IP classification</b>	IP68: - Complete protection against dust - Protection against continuous immersion in water (Tested for 5 hours in 1 m [3.3 ft] depth)
<b>Weather-ability</b>	Excellent, including UV-resistance and sea water immersion
<b>Chemical resistance</b>	No physical or performance changes in: - Salt water - NaOH (depending on concentration) - Sulfuric acid (depending on concentration) - Motor oil (tested in 168 hour exposure) Generally good against: - Most solvents - Most acids and bases

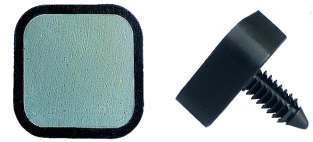
**\* NOTE:**

The RFID tag will not be functional if it is left at the maximum indicated temperatures such that the internal soak temperature exceeds +80 deg C (+176 deg F). The RFID tag itself will function between -50 deg C and +80 deg C.



# EaT-101 Push Tag

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## 1.5 SUPPORTED SERVICES

Several options are available:

- Tag pre-encoding
- Laser engraving on tags surface

For further details, please contact **TROI LLC**.

## 1.6 POSSIBLE APPLICATIONS

<b>Metal surfaces</b>	Metal pipes, metal returnable containers, metal canisters, metal pallets, high value metal items, aerospace applications, military applications, etc.
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## 2 INSTALLATION INSTRUCTIONS

### 2.1 TAG PLACEMENT

The EaT-101 tag must be mounted with the prong pushed through a suitably-sized hole, and flush with the mounting surface.

If the tag is not flush with the mounting surface, it might affect the tag's performance.

- Drill a hole approximately 7 mm in diameter in the surface that the tag is to be mounted on to.
  - NOTE: The mounting prong needs at least 18 mm of clearance (depth – not counting the width of the mounting surface [if mounting to thin sheet stock]) to mount the tag properly.
- Push the mounting prong into the hole until the tag is flush with the surface.
- Done!

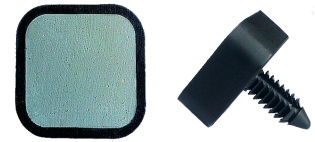
The EaT-101's performance depends on the shape of the metal object and the tags placement on that surface. Testing is recommended to verify performance in each use-case.

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# EaT-101 Push Tag

Technologies ROI, LLC



## 3 CONTACTING TROI LLC

For additional information and technical support contact:

### **TROI LLC**

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Mauldin SC 29662  
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www.troirfid.com

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