



# HS-101

## HF Shackle Tag



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### 1 PRODUCT DESCRIPTION

The **TROI HS-101 Shackle** RFID tag provides automatic identification and tracking capabilities never-before available in such a unique package designed for rugged or hazardous use-areas.

The plastic tie-wrap tag is designed to be mounted to any metallic surface by just securing the tie-wrap around it. The tag can withstand unprecedented high temperature (consistent temperatures of 85 degrees Centigrade), high pressure and severe environmental conditions.

#### 1.1 SPECIFICATIONS

<b>Device type</b>	Passive RFID tag
<b>Air interface protocol</b>	<b>HF:</b> ISO/IEC 15693-3, ISO/IEC 18000-3
<b>Operational frequency</b>	<b>HF :</b> 13.56 MHz
<b>Memory</b>	1024 bits, organized in 32 blocks of 4 bytes each
<b>Read range</b>	Up to 1.5 meters
<b>Size</b>	<b>L:</b> 195 mm <b>W:</b> (cable tie) 4.6 mm, (RFID) 7.2 mm
<b>Tag material</b>	<b>Cable Tie:</b> Polyamide 6.6 <b>RFID:</b> Epoxy Resin
<b>Flammability</b>	UL94 V2
<b>Applicable surfaces</b>	Any material, including surface mount to metal
<b>Product RoHS compliant?</b>	Yes

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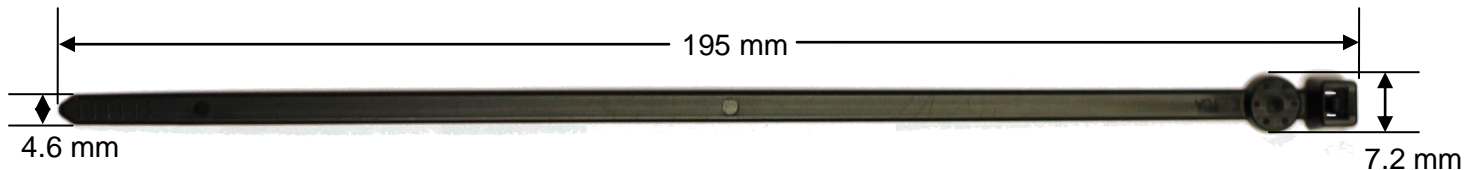
## HF Shackle Tag



### 1.2 DIMENSIONS

**Tie wrap:** L 195 mm (7.7 inches) x W 4.6 mm (0.18 inches)

**RFID Tag:** W 7.2 mm (0.28 inches)



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### 1.3 READ RANGE

	HF max read-range on metal with 4W EIRP
HS-101 (13.56 MHz)	~ 1.5 meters

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 +85°C* (-58°F to 185°F)
<b>IP classification</b>	IP69K
<b>Weather resistance</b>	Excellent, including UV-resistance and sea water immersion
<b>Chemical resistance</b>	No physical or performance changes in: <ul style="list-style-type: none"><li>- Salt water</li><li>- NaOH (depending on concentration)</li><li>- Sulfuric acid (depending on concentration)</li><li>- Motor oil (tested in 168 hour exposure)</li></ul> Generally good against: <ul style="list-style-type: none"><li>- Most solvents</li><li>- Most acids and bases</li></ul>

\* **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. The RFID tag itself will (resume) function between -50 deg C and +80 deg C.

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### 1.5 SUPPORTED SERVICES

- Tag pre-encoding
- Laser marking

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

### 1.6 POSSIBLE APPLICATIONS

**Any surface**

Lifting equipment inspections, chains, hoists, shackles, returnable containers, canisters, pallets, pipes, high value items, aerospace applications, military applications, etc.

## 2 INSTALLATION INSTRUCTIONS

Wrap the tie-wrap around the surface, insert the tail of the tie-wrap into the head of the tie-wrap and firmly pull the tie-wrap to secure the tag to the object – done!

**NOTE:** Tensioning tools are advised to be used when securing the tag, and are available.

## 3 MOUNTED PICTURES





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#### 4 CONTACTING TROI LLC

For additional information and technical support contact:

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#### **ADVISORY**

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