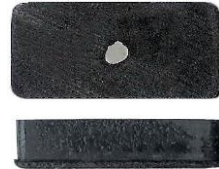



# OK-106 Ceramic RFID Tag



## CONTENTS

1	Product description .....	2
1.1	SpecificationS .....	2
1.2	dimensions .....	3
1.3	READ RANGE .....	4
1.4	environmental SPECIFICATIONS .....	4
1.5	supported services .....	5
1.6	possible applications .....	5
2	installation instructions .....	5
3	Contacting AbleID Ltd  .....	5

## 1 PRODUCT DESCRIPTION

The patent-pending **TROI OK-106 High Temperature Ceramic** RFID tag provides automatic identification and tracking capabilities never-before available in such a unique package designed for rugged or hazardous use-areas.

The high temperature ceramic-molded, adhesive-backed tag is designed to be mounted to any metallic surface by either using the adhesive to hold it to the surface, or using **TROI's AP-1 Adhesive Paint**. It can withstand unprecedented high temperature (consistent temperatures of 200 degrees Centigrade), high pressure and severe environmental conditions.

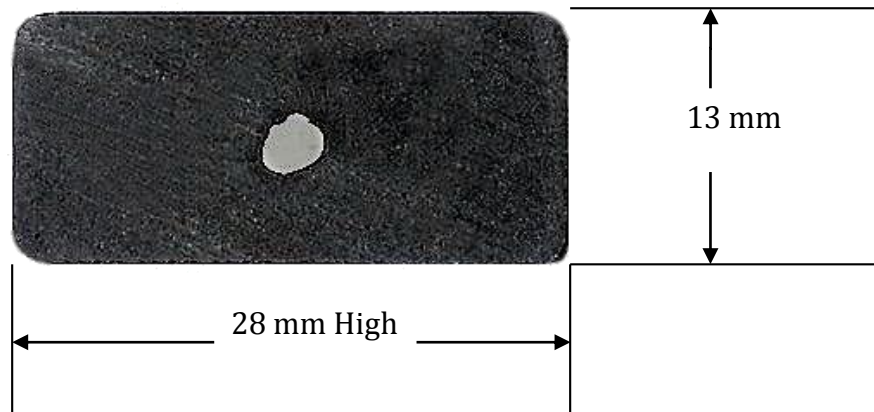
### 1.1 SPECIFICATIONS

<b>Device type</b>	Passive RFID tag
<b>Air interface protocol</b>	<b>UHF:</b> 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> Alien Higgs 3 (others on request) Optional: EM, Fujitsu, Impinj, NXP (others on request)
<b>EPC memory - UHF</b>	<b>Standard:</b> 128 bit Optional: Up to 240 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
<b>Size</b>	Length: 28 mm Width: 13 mm Height: 7 mm
<b>Tag material</b>	Ceramic
<b>Tensile strength</b>	<b>2500</b> psi minimum
<b>Applicable surfaces</b>	Any material
<b>Product RoHS compliant?</b>	Yes
<b>Standards compliancy</b>	ATEX-compliant

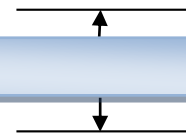
## 1.2 DIMENSIONS

**Length** 28 mm x **Width** 13 mm x **Height** 7 mm

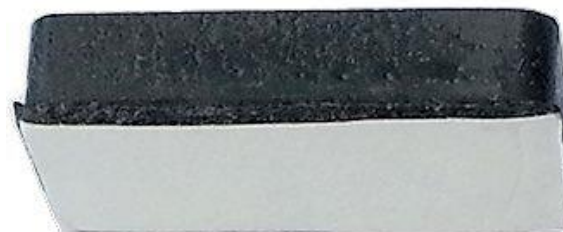
### PLAN VIEW



### SIDE VIEW



### OBLIQUE VIEW



### 1.3 READ RANGE

	UHF max read-range on metal with 4W ERP
<b>OK-106</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 **using an FCC (US) Reader, test results may be different for an ETSI (EU) reader.** 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*
<b>Temperature Cycling Test</b>	200 deg C, continuous for 30-days
<b>IP classification</b>	IP68K
<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.

## 1.5 SUPPORTED SERVICES

- Tag pre-encoding

For further details, please contact **AbleID Ltd**.

## 1.6 POSSIBLE APPLICATIONS

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

Pull the adhesive liner from the base of the tag and apply the tag to any metallic surface. For long term adhesion, use **TROI's AP-1 Adhesive\_Paint**: get the datasheet and use as directed.

## 3 CONTACTING ABLEID LTD

For additional information and technical support contact:

### **AbleID Ltd**

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### **ADVISORY**

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