

FT-1002 UHF tag

The UHF FT-1002 passive tag can be used on any surface. The tag is RoHS and ATEX compliant. It is particularly resistant to harsh environments such as chemical area, high temperatures (up to 100°C)...

Despite its very small size, it is able to read up to a distance of 6m.

Key features

- Passive tag
- RoHS compliant
- ATEX compliant
- Durable IP69K rating

Applications

- Aerospace
- Military
- ...

Item code: FTUHF0098

Functional specifications

| | |
|------------------------|--------------------------------------------------------------------------------------------------------|
| Type | UHF |
| Frequency | 860-960 MHz |
| Air interface protocol | EPC Global Class1 Gen2, ISO/IEC 18000-6C |
| IC Type | Alien Higgs3 (others on request) Optional: EM, Fujitsu, Impinj, NXP (others on request) |
| Memory | EPC 96 bit. User 128 bit. Extended memory memory 512 bit. TID 64 bit Optional: Up to 240 bit |
| Read range | 3 to 6m |

Physical specifications

| | |
|--------------------|--------------------------------------------------------------------------|
| Dimensions | 17.9*3.12mm; Chip: 4.2mm |
| Tag Material | Self extinguishing polyolefin |
| Applicable surface | Any material (metal reduces read distance significantly unless modified) |

User environment

| | |
|---------------------|------------------------------------|
| Certificates | RoHS Approved, ATEX compliant |
| Storage Temperature | -50°C to 100°C |
| Resistance | Tensile strength: 2500 psi minimum |
| Protection grade | IP69K |

Non-contractual datasheet

Read range

| | UHF max read-range on metal with 4W ERP |
|----------------------|-----------------------------------------------|
| FT-1002 (915 MHz) | 660.4cm / 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.

Environmental specifications

| | |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature Cycling Test | 100°C, continuous for 30-days 200 °C continuous - with degradation of the plastic, but not the tag |
| Weather resistance | Excellent, including UV-resistance and sea water immersion |
| Chemical resistance | 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 the FT-1002 tag 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.

Supported services

- Tag pre-encoding
- For further details, please contact AXEM Technology

Possible applications

| | |
|----------------|------------------------------------------------------------------------------------------------------|
| Metal surfaces | Metal returnable containers, metal canisters, metal pallets, metal pipes, high value metal items, |
|----------------|------------------------------------------------------------------------------------------------------|

Installation

- Wrap the tag around or along an object.
- Embed the tag into; fiberglass, composites, wood, concrete, compression or injection molds,...
- Fix the tag with a painting adhesive
- Clips or eyelets

V2.0
Non-contractual datasheet