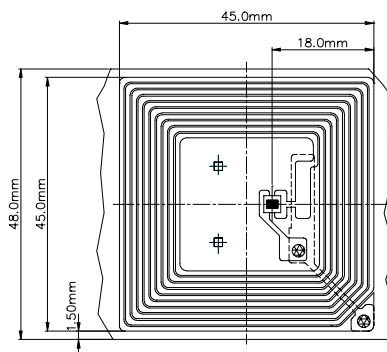


Data Sheet

Tag-it™ HF Transponder Inlay Square

Specifications:



| Part Number | RI-I01-110A | RI-I11-110A |
|--|--|------------------------------|
| Recommended Operating frequency | 13.56 MHz | |
| Passive Resonance Frequency (at +25°C) | 14.36 MHz \pm 200kHz (includes frequency offset to compensate further integration into paper; drops down to operating frequency when exposed to activation field strength) | |
| Typical activation field strength read (at +25°C) | 103 dB μ A/m | |
| Typical activation field strength write (at +25°C) | 108 dB μ A/m | |
| Factory programmed Read Only Number | 32 bits | |
| Memory (user programmable) | 256 bits organized in 8 x 32-bit blocks | |
| Typical programming cycles (at +25°C) | 100,000 | |
| Data retention time (at +55°C) | > 10 years | |
| Simultaneous Identification of Tags | Up to 50 tags per second (reader/antenna dependant) | |
| Uplink / downlink data rates | 26.7 kBd / 6.2 and 9 kBd | |
| RX modulation | Pulse-width coded, AM 100% modulation | |
| TX frequencies | Manchester encoded, A = $f_c \pm 423.75$ kHz, B = $f_c \pm 484.29$ kHz Low bit: transition A to B. High bit: transition B to A | |
| Antenna size | 45 mm x 45 mm (~1.77 in x ~1.77 in) | |
| Foil width | 48 mm \pm 0.5 mm (1.89 in \pm 0.02 in) | |
| Foil pitch | 48 mm +0.1mm/-0.4mm (~1.89 in) | 50.8 mm +0.1mm/-0.4mm (2 in) |
| Thickness | Chip: 0.355mm (~0.014 in) Antenna: 0.085mm (~0.0033 in) | |
| Base material | Substrate: PET (Polyethyleneterephthalate) Antenna: Aluminum | |
| Smallest bending radius allowed | 18 mm (~0.71 in) | |
| Operating temperature | -25°C to +70°C | |
| Storage temperature (single inlay) | -40°C to +85°C (warpage may occur with increasing temperature) | |
| Storage temperature (on reel) | -40°C to +40°C | |
| Delivery | Single row tape wound on cardboard reel with 500 mm diameter Reel width: approx. 60 mm (~2.36 in); inside 50 mm (~1.97 in) Hub diameter: 76.2 mm (3 in) | |
| Typical quantity per reel | 5,000 | |

For more information, contact the sales office or distributor nearest you. This contact information can be found on our web site at: <http://www.ti-rfid.com>

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