



EM MICROELECTRONIC - MARIN SA

SWATCH GROUP ELECTRONIC SYSTEMS

EM4026

Read only Contactless Identification Device

Description

The EM4026 passive transponder is a single chip with anti-collision features enabled. The free-running algorithm is very well suited to environments sensitive to the potential jamming caused by the reader's modulation. With this feature the reader only sends a Continuous Wave and listens to incoming replies from the tags. In the standard Free-Run operation very few numbers of tags can be counted with high throughput. The Fast Switch-Off and Slow-Down enables the possibility of counting a high number of items, typically for logistics applications.

A single coil is connected to the naked chip in order to make the passive tag.

Applications

- Logistic
- Manufacturing automation
- Anti-counterfeiting
- Industrial transponder
- Tracking and tracing

Features

- Implements free-running anti-collision protocol with FAST SWITCH-OFF and SLOW-DOWN modes
- Ability to identify a number of transponders higher than 100 (FAST MODE)
- Factory programmed 64 bit ID number
- Data rate options from RF/4 to RF/32
- Manchester data encoding
- Operating field frequency: 125 kHz
- On-chip resonant capacitor (250 pF)
- On-chip rectifier and voltage limiter
- No external supply buffer capacitor needed
- Very Low power consumption
- Pad size for direct bonding 200 x 400 um (bump)
- 40 to +85 °C operating temperature range

Typical Operating Configuration

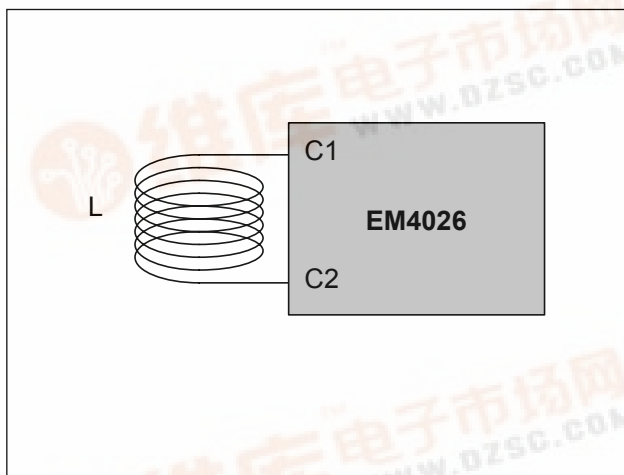


Fig. 1