# EM4135

# 13.56MHz, ISO15693 Standard Compliant Contactless Identification Device

## General Description

The EM4135 is a CMOS integrated circuit intended for use in contactless Read/Write transponders.

The 2.4k bit EEPROM memory contained in the chip is organized in 38 words of 64 bits, each word can be irreversibly locked. The memory contains a unique serial number (UID).
The ISO 15693 anticollision algorithm allows operating more tags in the field simultaneously. The EM4135 is completely ISO15693 compliant since it includes all ISO15963 mandatory features.

The 64 bits UID as defined in ISO15693 standard is factory programmed and locked. It includes a 6 bits chip type and a 10 bits customer code made specific on request.

The resonant capacitor value is selected by metal mask.

## Applications

- ❑ Access Control
- ❑ Ticketing
- ❑ Asset management

## Features

- ❑ ISO15693 Standard: Fully Compliant
- ❑ Operating Frequency: 13.56MHz ± 7KHz (ISM, world-wide licence free available)
- ❑ 2.4K bit EEPROM organised in 38 words of 64 bits
- ❑ 64-bit Unique Identifier (UID)
- ❑ Lock feature convert EEPROM words in Read Only
- ❑ Support Application Field Identifier (AFI)
- ❑ Power-check for EEPROM write operation
- ❑ Resonant capacitor integrated on chip 28pF or 95pF (selectable by mask option)
- ❑ No external supply buffer capacitor needed
- ❑ -40 to +85°C temperature range
- ❑ Very low Power consumption (no battery needed)
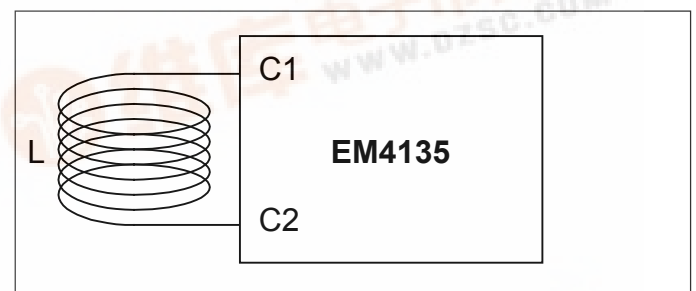- ❑ Bonding pads optimised for flip-chip assembly

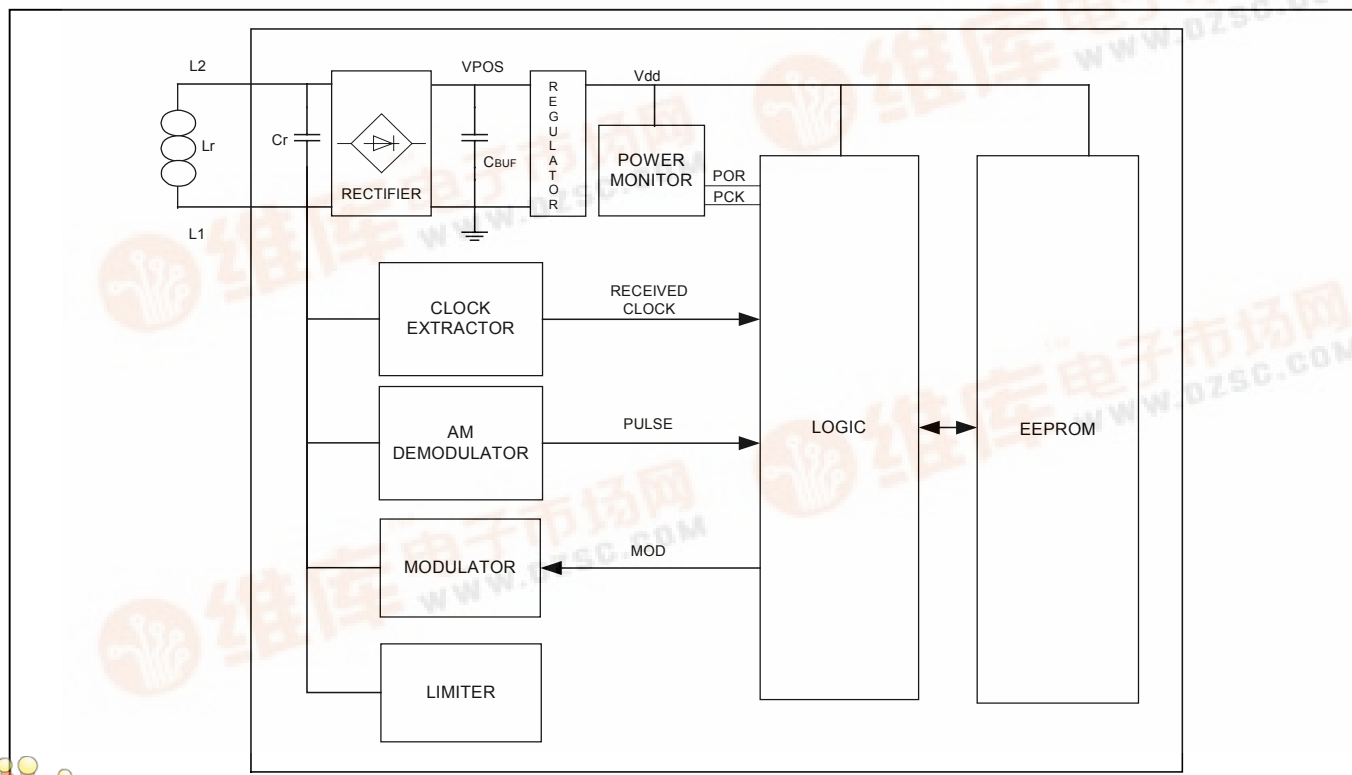## Typical Operating Configuration



Figure 1.

## Block Diagram



Figure 2.