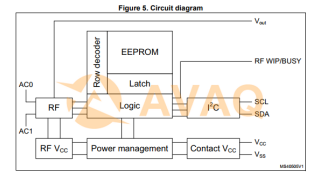


NFC/RFID Tag and Transponder IC 13553kHz to 13567kHz 4Kbit 8-Pin UDFPN EP T/R



Images are for reference only

[Inquiry](#)

Manufacturer: [STMicroelectronics, Inc](#)

Package/Case: 8-UDFN

Product Type: RF Integrated Circuits

RoHS: RoHS Compliant/Lead free 

Lifecycle: NRND

General Description

The M24LR04E-R device is a Dynamic NFC/RFID tag IC with a dual-interface, electrically erasable programmable memory (EEPROM). The logic scheme is shown in Figure 1.

It features an I2C interface and can be operated from a VCC power supply. It is also a contactless memory powered by the received carrier electromagnetic wave. The M24LR04E-R is organized as 512×8 bits in the I2C mode and as 128×32 bits in RF mode. The M24LR04E-R also features an energy harvesting analog output, as well as a user-configurable digital output pin toggling during either RF write in progress or RF busy mode.

Key Features

Belongs to ST25 family, which includes all NFC/RFID tag and reader products from ST

I2C interface

Two-wire I2C serial interface supports 400kHz protocol

Single supply voltage:

1.8V to 5.5V

Byte and Page Write (up to 4 bytes)

Random and Sequential read modes

Self-timed programming cycle

Automatic address incrementing

Enhanced ESD/latch-up protection

I2C timeout

Contactless interface

ISO15693 and ISO18000-3 mode 1 compatible

13.56MHz \pm 7kHz carrier frequency

Total tag: 10% or 100% ASK modulation using 1 out of 4 (2.6Kbit/s) or 1 out of 256 (1.6Kbit/s) pulse position coding

From tag: load modulation using Manchester coding with 423kHz and 484kHz subcarriers in low (6.6kbit/s) or high (26kbit/s) data rate mode. Supports the 53kbit/s data rate with Fast commands

Internal tuning capacitance: 27.5pF

64-bit unique identifier (UID)

Read Block & Write (32-bit blocks)

Digital output pin

User configurable pin: RF write in progress or RF busy mode

Energy harvesting

Analog pin for energy harvesting

4 sink current configurable ranges

Temperature range

From -40 to 85°C

Memory

4-Kbit EEPROM organized into:

512 bytes in I2C mode

128 blocks of 32 bits in RF mode

Write time

I2C: 5ms (max.)

RF: 5.75ms including the internal Verify time

Write cycle endurance:

1 million write cycles at 25°C

150k write cycles at 85°C

More than 40-year data retention

Multiple password protection in RF mode

Single password protection in I2C mode

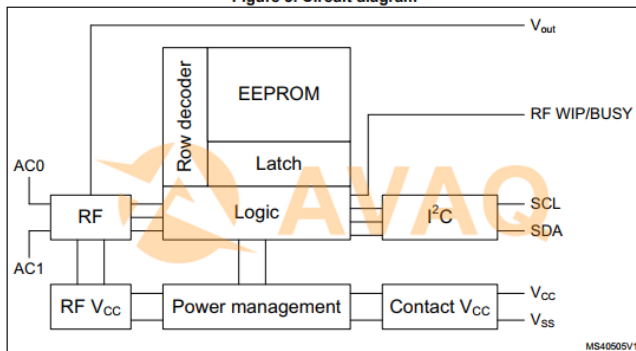
Package

SO8 (ECOPACK2)

TSSOP8 (ECOPACK2)

UFD8 (ECOPACK2)

Figure 5. Circuit diagram



Recommended For You

M24LR04E-RDW6T/2

STMicroelectronics, Inc
TSSOP8

M24SR16-YDW6T/2

STMicroelectronics, Inc
TSSOP-8

M24LR64E-RMN6T/2

STMicroelectronics, Inc
SOP8

M24SR02-YDW6T/2

STMicroelectronics, Inc
TSSOP8

M24SR64-YDW6T/2

STMicroelectronics, Inc
TSSOP-8

M24LR64E-RDW6T/2

STMicroelectronics, Inc
TSSOP8

M24SR64-YMN6T/2

STMicroelectronics, Inc
SO-8

M24SR02-YMC6T/2

STMicroelectronics, Inc
UFDFPN-8

M24SR04-YDW6T/2

STMicroelectronics, Inc
TSSOP8

M24LR16E-RMC6T/2

STMicroelectronics, Inc
UFDFPN-8

M24LR64E-RMC6T/2

STMicroelectronics, Inc
MLP-8

M24LR04E-RMN6T/2

STMicroelectronics, Inc
SOP8

M24LR16E-RMN6T/2

STMicroelectronics, Inc
SOP8

M24SR04-YMC6T/2

STMicroelectronics, Inc
UFDFPN-8

M24SR04-GMC5T/2

STMicroelectronics, Inc
UFDFPN-8