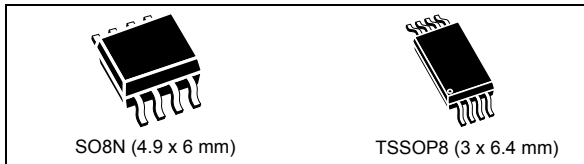


Dynamic NFC/RFID tag IC with 2-Kbit EEPROM
with up to 2x pulse width modulation outputs

Data brief

**Features****Pulse width modulation outputs**

- Up to 2x independent outputs
 - 1x PWM output with ST25DV02K-W1
 - 2x PWM outputs with ST25DV02K-W2
- From 488 Hz to 31250 Hz
- 62.5 ns pulse width resolution:
 - from 15-bit resolution at 488 Hz
 - to 9-bit resolution at 31.25 kHz
- Accuracy: $\pm 10\%$ over temperature range
- No need for external oscillator
- Supply voltage from 1.8 V to 5.5 V, independent from contactless interface
- Independent push-pull outputs
 - Up to 4 mA drive capability per output
 - Adjustable output drive for low power and low noise application
- Live update of PWM parameters controlled by contactless interface

Contactless interface

- Based on ISO/IEC 15693 and NFC Forum Type 5 Tag
- Supports all ISO/IEC 15693 modulations, coding, sub-carrier modes and data rates
- Single and multiple blocks read
- Internal tuning capacitance: 28.5 pF

Memory

- 2-kbits of EEPROM
- Accessible in blocks of 4x bytes
- 5 ms typical write time (one block)

- Data retention: 40 years
- Write cycles endurance:
 - 100k write cycles at 85 °C

Data protection

- Up to 4 independent areas, including the PWM control area, with flexible protection mechanism based on 32/64-bits passwords
- System configuration: write protection by 32-bit password
- TruST25™ Digital signature mechanism for authentication

Temperature range

- From -40 °C to +85 °C (Contactless interface)
- From -40 °C to +105 °C (PWM interface)

Package

- 8-pin packages
- ECOPACK2® (RoHS compliant)

Description

The ST25DV02K-W1/W2 device is an NFC/RFID tag IC with PWM outputs. It embeds an EEPROM memory of 2 Kbits, which can be divided for use-case flexibility. The PWM output can be programmed independently and securely, allowing a large field of application. The IC provides live update of PWM parameters by contactless interface, extending the user experience. The device can be operated from a 13.56 MHz RFID reader or any NFC mobile phone. The contactless interface is based on ISO/IEC15693 and NFC Forum type 5 tag standards.

1 Revision history

Table 1. Document revision history

| Date | Revision | Changes |
|-------------|-----------------|---|
| 16-Feb-2018 | 1 | Initial release. |
| 20-Feb-2018 | 2 | Changed the document scope from ST Restricted to public |

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