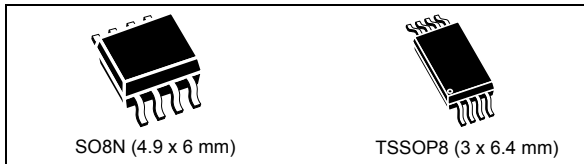


**Dynamic NFC/RFID tag IC with 2-Kbit EEPROM**  
**with up to 2x pulse width modulation outputs**

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**

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

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