

# PRODUCT OVERVIEW



## WM8023

### MINIATURE 8-BIT VOLTAGE OUTPUT DAC WITH SERIAL INTERFACE

WM8023 is an 8-bit voltage output digital to analogue converter (DAC) with a serial interface in an 8 pin SO or DIP package. WM8023 is simple to use, typically in applications such as solid state potentiometers or signal attenuates. WM8023 communicates with a controlling microprocessor via a three wire serial interface comprising Clock, Data and CSB lines. With CSB input held low, 8-bits of serial data is input on the rising edge of the clock to the Data pin. Once all data bits have been clocked in, bringing CSB high updates the DAC output by transferring data in the serial input register to the DAC data latch. Digital inputs have Schmitt triggers and are CMOS compatible. WM8023 runs from + 5V or  $\pm 5V$  supplies and is guaranteed monotonic. The voltage reference has

a high impedance input buffer feeding the resistive DAC whose decoded output drives the OUT pin via a voltage output buffer. Ideal in space critical applications WM8023 is available in small outline (SO) and dual-in-line plastic (DIP) packages for the extended (-25°C to 85°C) temperature range.

#### ORDERING INFORMATION

DEVICE	TEMP. RANGE	PACKAGE
WM8023EP	-25 °C to 85 °C	8-pin Plastic DIP
WM8023ED	-25 °C to 85 °C	8-pin Plastic SO

#### FEATURES

- 8-bit voltage output DAC
- High impedance reference input buffer
- Voltage output buffer
- 8-pin package: SO and DIP
- Single 5V or Dual  $\pm 5V$  supply operation
- Low power: 7.5 mW at 5V
- Guaranteed monotonic output
- Fast settling time: 3 microseconds to 1/2 LSB

#### APPLICATIONS

- Programmable voltage source
- Programmable attenuator
- Mobile communications
- Automatic test equipment
- Industrial control

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