

PRODUCT OVERVIEW



WM8015

8-BIT VOLTAGE OUTPUT DAC WITH NON-VOLATILE MEMORY AND SERIAL INTERFACE

WM8015 is an 8-bit voltage output digital to analogue converter (DAC) with on-chip non-volatile memory and a serial interface in an 8 pin SO or DIP package. WM8015's non-volatile memory provides the facility to store a DAC setting that is automatically recalled at power-up. This solid state potentiometer function enables factory set up of a reference voltage or signal attenuation. Non-volatile memory programming operates from the standard + 5V or $\pm 5V$ supplies used with WM8015. WM8015 communicates with a controlling microprocessor via a three wire serial interface comprising Clock, Data and LatchB lines. A 10 bit command word containing 8 data bits and 2 instruction bits, is input on the rising edge of the clock to the Data pin. Instruction bits are executed when the LatchB input is pulsed low after the command word is clocked in. Instruction bits cause either: storage of data contained in the DAC data latch into the non-volatile memory, loading of input

data directly into the DAC data latch or recall of data from the non-volatile memory to the DAC data latch. Digital inputs have Schmitt triggers and are CMOS compatible. 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 WM8015 is available in small outline (SO) and dual-in-line plastic (DIP) packages for the extended (-25 to 85°C) temperature range.

ORDERING INFORMATION

DEVICE	TEMP. RANGE	PACKAGE
WM8015EP	-25 °C to 85 °C	8-pin Plastic DIP
WM8015ED	-25 °C to 85 °C	8-pin Plastic SO

FEATURES

- On-chip non-volatile memory
- 8-pin package: SO and DIP
- Low power: 7.5mW at 5V
- Single 5V or dual $\pm 5V$ supply operation
- Fast settling time: 3 microseconds to 1/2 LSB
- 8-bit voltage output DAC

APPLICATIONS

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

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