

Description

The E8403A has a Driver and Window Comparator receiver for each channel with performance settings to save power or maximize bandwidth.

All level's DACs for the Driver and Receiver are on-chip and are programmed via a high speed serial bus. Each of the level's DACs have offset and gain registers for on-chip calibrations.

The Driver circuit is capable of forcing two levels to the DUT (DVH and DVL) as well as a third voltage for a termination level (DVT) to terminate high-speed DUT signals to the Comparator receivers into a high quality 50Ω load. The Driver can also be configured to a high impedance (HiZ) state for an open termination of DUT signals.

Waveform clamps are also available to clip the input signals from a DUT when not using the Driver as a termination. The clamps prevent reflections from returning to the DUT transmission line which can create timing errors and false triggering.

All of the on-chip DAC levels and configuration registers for each channel may be programmed via SET commands. This PinCast method of programming allows all channels in a system to be programmed concurrently with a simple set command whereby any pin channel that had been assigned to that set will respond.

The two driver circuits may be placed into a differential drive mode. This reduces driver-to-driver skews to levels difficult to achieve by external deskewing. The two window comparators may also be placed into a differential receive mode. These features enable higher quality testing of differential signals to/from the DUT.

Applications

- Logic Testers
- Mixed-Signal Test Equipment
- Memory Testers
- Flash Memory Testers
- ASIC Verifiers

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Features

- Two Fully Integrated Pin Channels including:
 - 16-bit DACs for each level
 - Tri-level Driver
 - Window Receiver
 - Waveform Clamps
- Driver, Comparator maximum 8V span over -2 to +7V range
- Configurable Output Protection
- 50MHz Serial Bus Programming
 - SPI™/QSPI™/ MICROWIRE™
 - Daisy-chainable
- Power Dissipation
 - ~0.8W/Channel (quiescent, low performance, I/O Mode)
 - ~0.9W/Channel (quiescent, high performance, I/O Mode)
- Pin and Software Compatible with E8400, E8404, E8405, E8410 and E8415
- Digitally Programmable Performance/Power
- Differential Drive and Receive Functionality
- Optimal Small Swing Performance
- Small 11mm x 11mm Package

Functional Block Diagram
