

FEATURES

- 16-element FIFO for event recording
- 19 configurable I/Os allowing functions such as
 - Keypad decoding for matrix up to 11 × 8
 - Key press/release interrupts
 - Key pad lock/unlock
- GPIO functions
 - GPI with selectable interrupt level
 - 100 kΩ/300 kΩ pull-up
 - 300 kΩ pull-down
 - GPO with push-pull or open drain
- Dual programmable logic blocks
- PWM generator
 - Internal PWM generation
 - External PWM with internal PWM AND function
- Clock divider
- Reset generators
- I²C interface with fast-mode plus (Fm+) support up to 1 Mbps
- Open-drain interrupt output
- Available in a 3.5 mm × 3.5 mm × 0.75 mm, 24-lead lead frame chip scale package (LFCSP)

APPLICATIONS

- Mobile devices requiring large QWERTY type keypads and I/O expansion capabilities

GENERAL DESCRIPTION

The ADP5589 is an I/O port expander and keypad matrix decoder designed for QWERTY type phones that require a large keypad matrix and expanded I/O lines. I/O expander ICs are used in mobile platforms as a solution to the limited number of GPIOs available on the main processor.

The ADP5589 handles all key scanning and decoding and can flag the main processor via an interrupt line that new key events have occurred. The ADP5589 is equipped with a FIFO to store

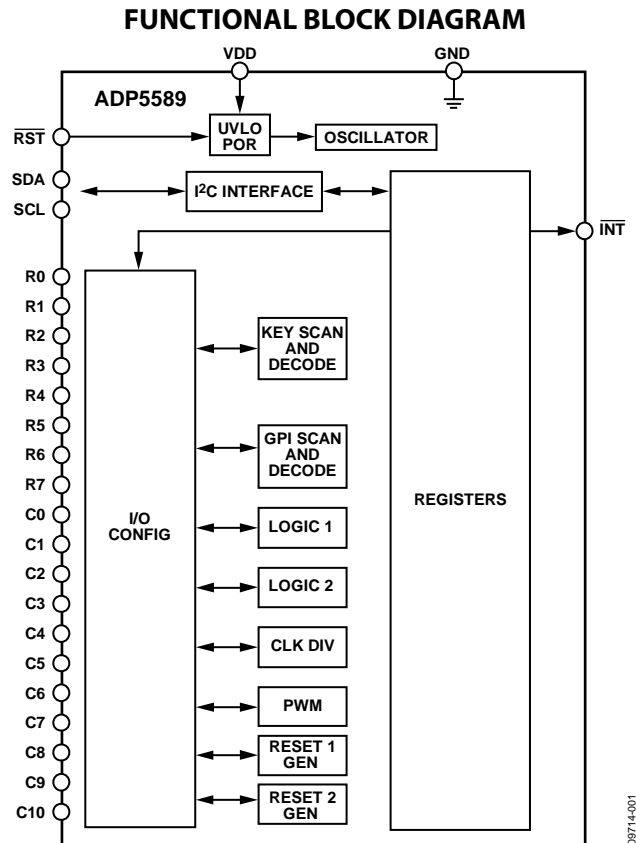


Figure 1.

up to 16 events. Events can be read back by the processor via an I²C-compatible interface.

The ADP5589 frees up the main processor from having to monitor the keypad, thereby reducing power consumption and/or increasing processor bandwidth for performing other functions.

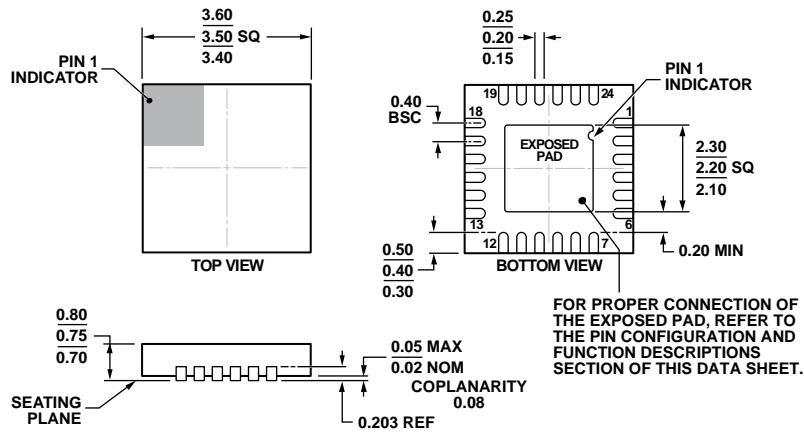
For more information about the ADP5589, including the complete data sheet, contact your local Analog Devices, Inc., sales office at www.analog.com/sales.

Rev. Sp0

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OUTLINE DIMENSIONS



COMPLIANT TO JEDEC STANDARDS MO-220-WFFE.

Figure 2. 24-Lead Lead Frame Chip Scale Package [LF CSP_WQ]
 3.5 mm × 3.5 mm Body, Very Very Thin Quad
 (CP-24-11)

Dimensions shown in millimeters

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I²C refers to a communications protocol originally developed by Philips Semiconductors (now NXP Semiconductors).