SHARP®

Integrated Circuits Group

APPLICATIONS:

- Cellular Phone
- Battery Charger

SM5K5 4-Bit Single-Chip Microcomputer

FEATURES

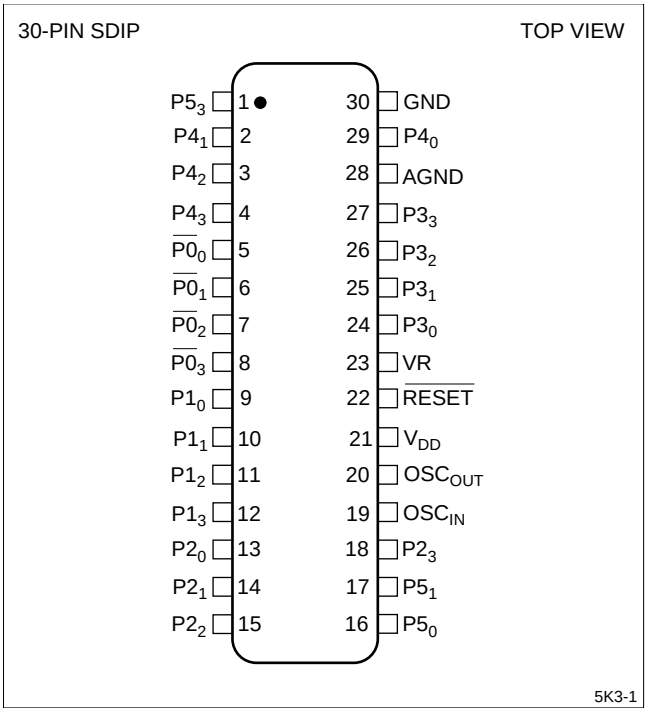
- ROM capacity 2,048 × 8-bits
- RAM capacity 128 × 4-bits
- 50 instruction sets
- 4 levels of subroutine nesting
- I/O port
  - 8 input
  - 4 ouput
  - Input/output: 12 (36-pin QFP/32-pin SOP), 11 (30-pin SDIP), 8 (28-pin SOP)
- Interrupts
  - Internal interrupt × 1 (timer)
  - External interrupt × 2 (2 external interrupt inputs)
- A/D converter
  - 10-bits resolution
  - 4 channels
- Timer/counter 8-bit × 1
- Built-in main clock oscillator for system clock
  - Ceramic/crystal oscillator
- Signal generation for real time clock*
- Built in 15 stages divider for real time clock*
- Instruction cycle time
  - 1 µs MIN. (2 MHz, at 5 V ±10%)
  - 1 µs MIN. (1 MHz, at 2.2 V to 5.5 V)
- Large current output pins (LED direct drive)
  - 15 mA TYP. × 4 (sink current)
- Supply voltages 2.2 V to 5.5 V
- Packages
  - 30-pin SDIP (SDIP030-P-0400)
  - 32-pin SOP (SOP032-P-0525)
  - 36-pin QFP (QFP036-P-1010)
  - 28-PIN SOP (SOP028-P-0450)

NOTE: *In case of using crystal oscillator

DESCRIPTION

The SM5K5 are CMOS 4-bit single-chip microcomputer incorporating 4-bit parallel processing function, ROM, RAM, 10-bit A/D converter and timer/counters. It provides three kinds of interrupts and 4 levels subroutine stack. Since its fabricated through CMOS a process, the chip requires less power and is available in a small package: best suited for low power controlling, and compact equipment like a precision charger.

30-PIN SDIP PINOUT



The information for this document is from the Microcomputer Databook, issued in March 1997.

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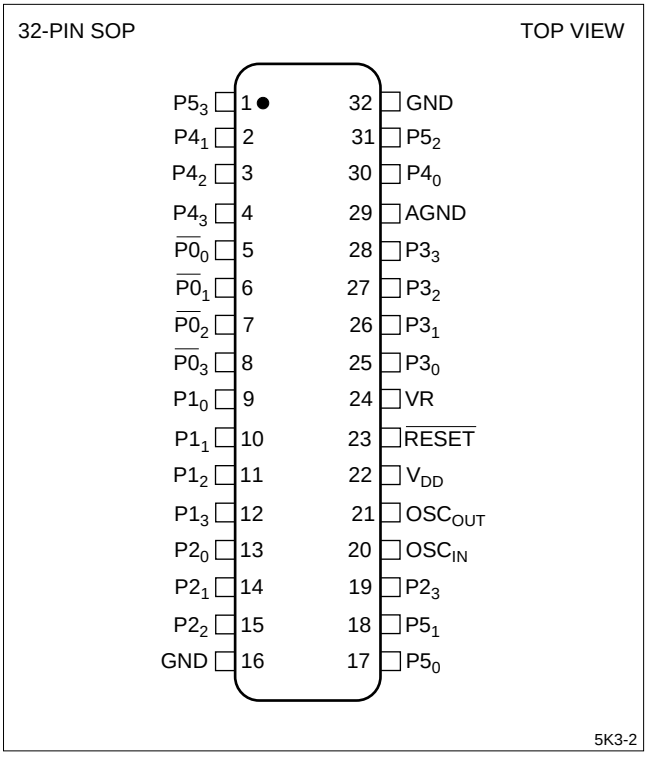
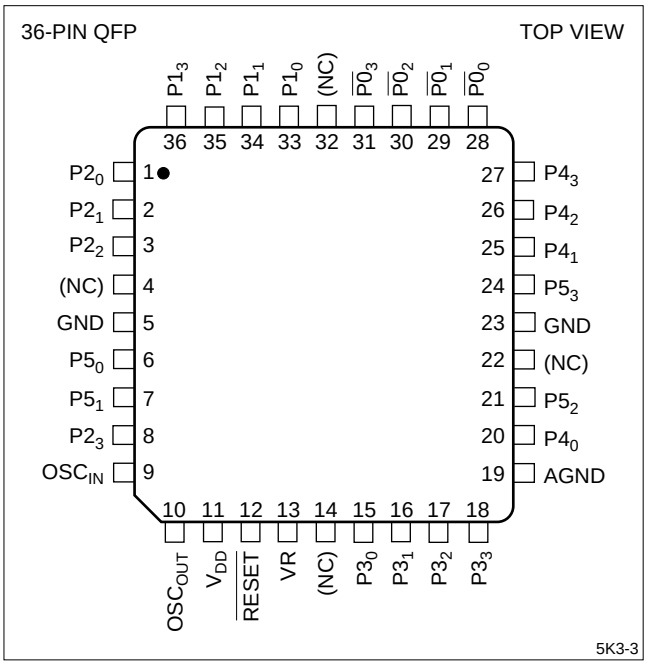
32-PIN SOP PINOUT



36-PIN QFP PINOUT



28-PIN SOP PINOUT