EPSON

E0C63454

4-bit Single Chip Microcomputer

Preliminary

- 4-bit E0C63000 Core CPU
- Built-in Dot-matrix Type LCD Driver
- Low Voltage Operation (1.8V min.)
- High Speed Instruction Cycle (2-6CPI)

■ DESCRIPTION

The E0C63454 is a CMOS 4-bit microcomputer composed of a CMOS 4-bit core CPU, ROM, RAM, dot-matrix type LCD driver and counters. And the E0C63454 can be operated high speed and spend little current. The E0C63454 has a large RAM and LCD driver, so that the E0C63454 is best suited for systems such as Caller ID and Data-bank.

■ FEATURES

- CMOS LSI 4-bit parallel processing
- Main clock ..... 32.768kHz (Typ. X'tal)/60kHz (Typ. CR)
- Sub clock ..... 1.8MHz (Typ. CR)/4MHz (Max. Ceramic)
- Instruction set ..... 46 types (411 instructions with all)
- Instruction execution time ..... 32.768kHz : 61µsec (Min.)
  4MHz : 0.5µsec (Min.)
- ROM capacity ..... Code ROM : 4,096 words × 13 bits
  Data ROM : 2,048 words × 4 bits
- RAM capacity ..... Data memory : 1,024 words × 4 bits
  Display memory : 680 bits
- Input port ..... 4 bits
- Output port ..... 4 bits
- I/O port ..... 8 bits
- LCD driver ..... 40 segments × 8/16/17 commons
- Clock timer ..... 1 ch.
- Stopwatch timer ..... 1 ch.
- Programmable timer ..... 8 bits × 2 ch.
- Watchdog timer ..... Built-in
- Serial interface ..... Synchronous 8 bits
- Sound generator ..... With envelope and 1-shot output functions
- Supply voltage detection (SVD) circuit ..... 16 values by programmable (from 1.85 to 3.30V)
- Interrupts ..... External : Key interrupt 1 line
  Internal : Clock timer interrupt 4 lines
  : Stopwatch timer interrupt 2 lines
  : Programmable timer interrupt 2 lines
  : Serial interface interrupt 1 line
- Power supply voltage ..... 2.2 to 6.4V (Min. 1.8V with OSC1 X'tal oscillation circuit only)
- Current consumption ..... 1.0µA (32.768kHz, LCD off, 3.0V HALT)
  10.0µA (32.768kHz, LCD on, 3.0V RUN)
  1000µA (4MHz, LCD on, 3.0V RUN)
- Package ..... TBD or Chip

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