EPSON

E0C88832

8-bit Single Chip Microcomputer

- ● Original Architecture Core CPU
- ● Low Voltage Operation (1.8V/50kHz, 2.4V/4.2MHz)
- ● High Speed Operation (0.244µsec/8.2MHz)
- ● Built-in Dot-matrix LCD Driver (32 com × 51 seg)
- ● Built-in SVD (16 different voltage levels)
- ● Built-in Serial I/O

Preliminary

Low Voltage Operation Products

■ DESCRIPTION

The E0C88832 is a CMOS 8-bit microcomputer composed of a CMOS 8-bit core CPU, ROM, RAM, I/O, serial interface, dot-matrix LCD driver, timer and event counter. The E0C88832 fully operable over a wide range of voltages, and can perform high speed operations even at low voltage. The E0C88832 features low current consumption, this makes it suitable for battery driven portable equipment.

■ FEATURES

- ● CMOS LSI 8-bit parallel processing
- ● Architecture .... SEIKO EPSON original architecture
- ● Clock .... Twin clock system   Low-speed clock: 32.768kHz
              High-speed clock: 8.2MHz (3.5V, Max.)
- ● Instruction execution time .... 0.244µsec (Min.)
- ● Special instruction set .... 608 types (Multiplication and division instructions included)
- ● ROM capacity .... 32K × 8 bits
- ● RAM capacity .... 1.5K × 8 bits (Data RAM)
              3,216 bits (Display RAM)
- ● I/O port .... Input only   : 9 bits   (EVIN is available by software)
              Output only   : 5 bits   (BZ, $\overline{BZ}$, FOUT, TOUT and $\overline{TOUT}$ are available by software and mask option)
              Bidirectional I/O : 8 bits   ($\overline{SRDY}$, $\overline{SCLK}$, SIN and SOUT are available by software)
- ● Serial interface .... 1 channel (Clock synchronous or Asynchronous can be selected by software)
- ● LCD driver .... Dot-matrix type (5 × 8 or 5 × 5 fonts)
              67 segments ×   8 commons (1/5 bias)
              67 segments × 16 commons (1/5 bias)
              51 segments × 32 commons (1/5 bias)
- ● Timer .... 8-bit programmable timer/event counter : 2 channels
                (16-bit 1 channel timer is available)
              Clock timer with 60-second counter   : 1 channel
              Stopwatch timer   : 1 channel
- ● Sound generator .... 8 levels, with envelope, volume adjustment and 1 shot functions
- ● Watchdog timer .... Built-in
- ● Supply voltage detection (SVD) circuit .... 16 different voltage levels can be detected
- ● Interrupt .... External-input : 2 systems (3 types)
              Internal-timer   : 3 systems (9 types)
              Serial I/F   : 1 system (3 types)
- ● Supply voltage .... 1.8V to 5.5V
- ● Current consumption .... SLEEP mode   TBD
              HALT mode   TBD
              RUN mode   TBD
                              TBD
- ● Package .... QFP15-128pin (plastic), QFP8-128pin (plastic) or chip

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