

SM3514

4-Bit Single-Chip Microcomputer (For Data Bank Use)

DESCRIPTION

The SM3514 is a CMOS 4-bit single-chip microcomputer for databank incorporating data memory RAM, LCD driver, key input circuits and buzzer output circuit. By connecting an external crystal, a 1 Hz timer interrupt is made possible for easier clock function.

FEATURES

- ROM capacity :

Program ROM	8 k x 23 bits
Character ROM	5 x 8 x 128 bits
- RAM capacity :

Working RAM	256 x 4 bits
Display RAM	60 x 8 bits
Data RAM	512 x 8 bits
- LCD display : 60 - segment x 8 - common
- I/O ports :

Buzzer output	1 bit (4 kHz)
Key input	7 bits
- Standby release : 2 events (2 Hz signal, key input)
- Built-in oscillator :

System clock (built-in CR oscillator)	300 kHz
Timer (built-in CR oscillator)	32.8 kHz
(external crystal)	32.768 kHz
- Instruction cycle time : 10 μ s
- Operating temperature : -10 to +60°C
- Supply voltage : 2.5 to 3.4 V
- Package : 100-pin QFP (QFP100-P-1420)

The diagram illustrates the SM3514 IC, a microcontroller for a calculator. It features a central chip with pins labeled KI1, VCC, TEST, RESET, XI, XO, BZ, and VCC. The chip is connected to a 'Key matrix (MAX. 84-Key)' which provides signals S1-S6 and S53-S60. The IC has a 'Common signal' output and a 'Segment signal' output. The internal structure shows a grid of keys (KI1-KI7) and a segment display (S1-S60).

100 QFP (QFP100-P-1420)

