

# SM3504

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

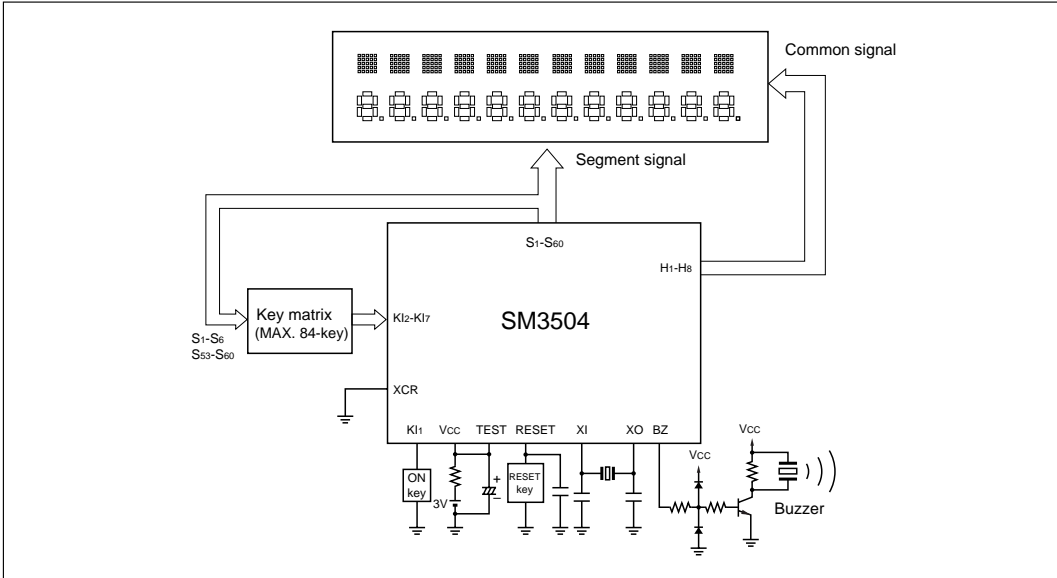
### DESCRIPTION

The SM3504 is a CMOS 4-bit single-chip microcomputer for databank incorporating data memory RAM, LCD driver, key input circuit and buzzer output circuit. By connecting an external crystal, a 1 Hz timer interrupt is made possible for easier clock function.

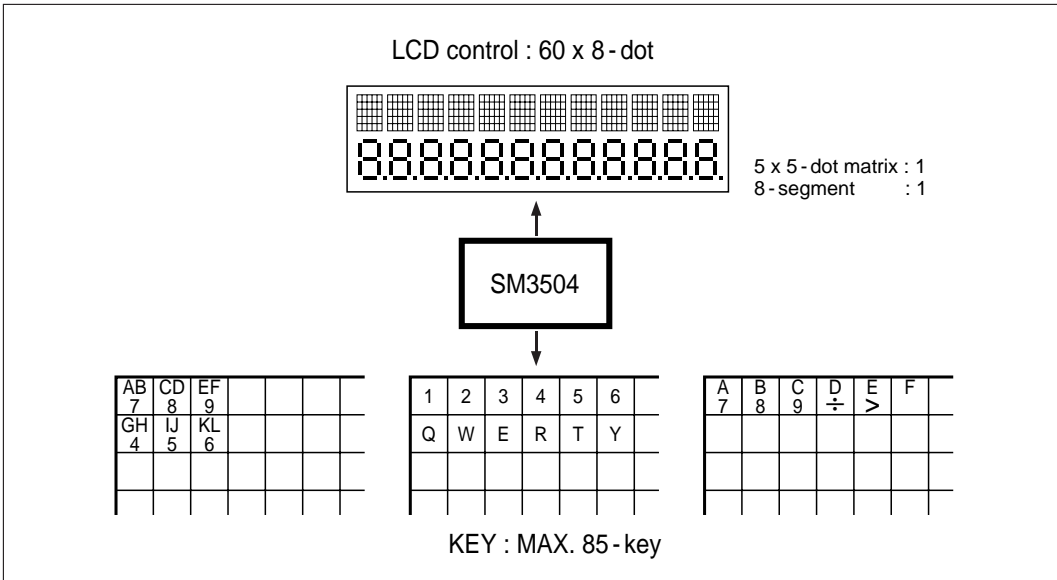
### FEATURES

- ROM capacity :
  - Program ROM    6 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) 250 kHz
  - Timer (built-in CR oscillator)        32.8 kHz
  - (external crystal)                    32.768 kHz
- Instruction cycle time : 12  $\mu$ s
- Operating temperature : -10 to +60°C
- Supply voltage : 2.5 to 3.4 V
- Package : 80-pin QFP (QFP080-P-1420)

SYSTEM CONFIGURATION EXAMPLE



APPLICATION EXAMPLE



### 80 QFP (QFP080-P-1420)

