

## FEATURES

- ROM Capacity
  - Program ROM  $6\text{K} \times 23\text{-bits}$
  - Character ROM  $5 \times 8 \times 128\text{-bits}$
- RAM Capacity
  - Working RAM  $256 \times 4$  bits
  - Display RAM  $60 \times 8$  bits
  - Data RAM  $512 \times 8$  bits
- LCD Display 60 Segment  $\times 8$  Common
- I/O Ports
  - Buzzer Output 1-bit (4 kHz)
  - Key Input 7-bits
- 2 Events Standby Release
  - 2 Hz Signal
  - Key Input

- Built-in Oscillator
  - System Clock (Built-in CR Oscillator) 250 kHz
  - Built-in CR Oscillator Timer 32.8 kHz
  - External Crystal Timer 32.768 kHz
- Instruction Cycle Time 12  $\mu\text{s}$
- Operating Temperature  $-10^\circ\text{C}$  to  $+60^\circ\text{C}$
- Supply Voltage 2.5 V to 3.4 V
- 80-pin QFP Package (QFP080-P-1420)

## DESCRIPTION

The SM3504 is a CMOS 4-bit single-chip microcomputer for data bank use 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.

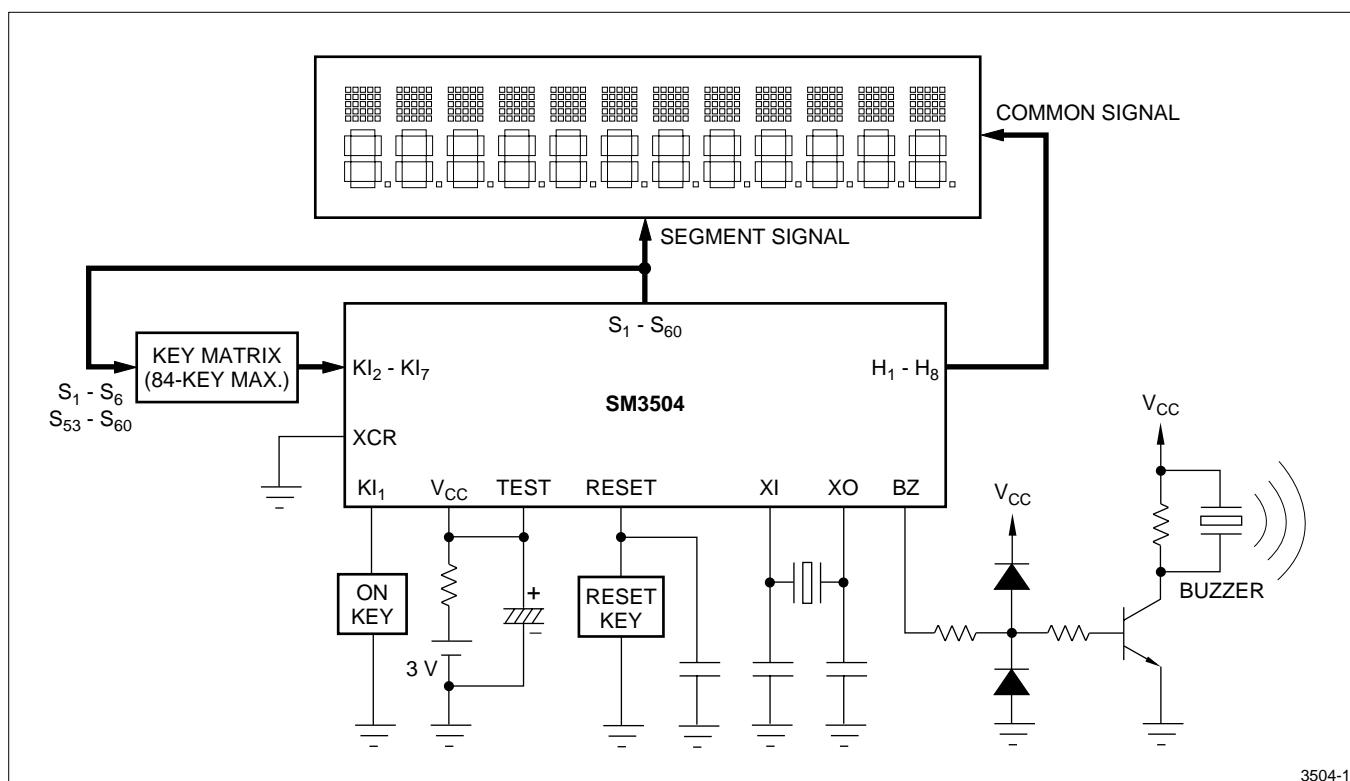


Figure 1. System Configuration Example

3504-1

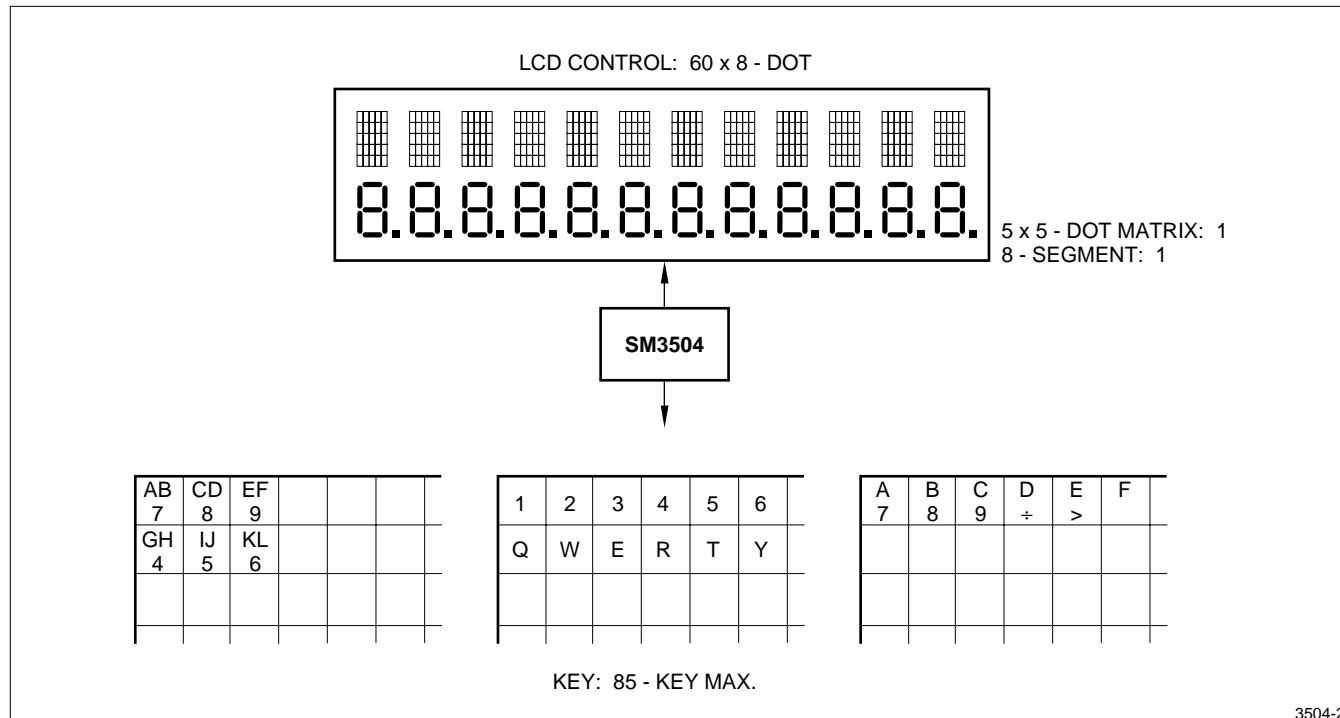


Figure 2. Application Example

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