

SM3512

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

DESCRIPTION

The SM3512 is a CMOS 4-bit single-chip microcomputer for databank incorporating data memory RAM, LCD driver, key/switch input circuit, 8-bit parallel I/O port, 2 output ports, external memory control circuit, and buzzer output circuit.

FEATURES

- ROM capacity :

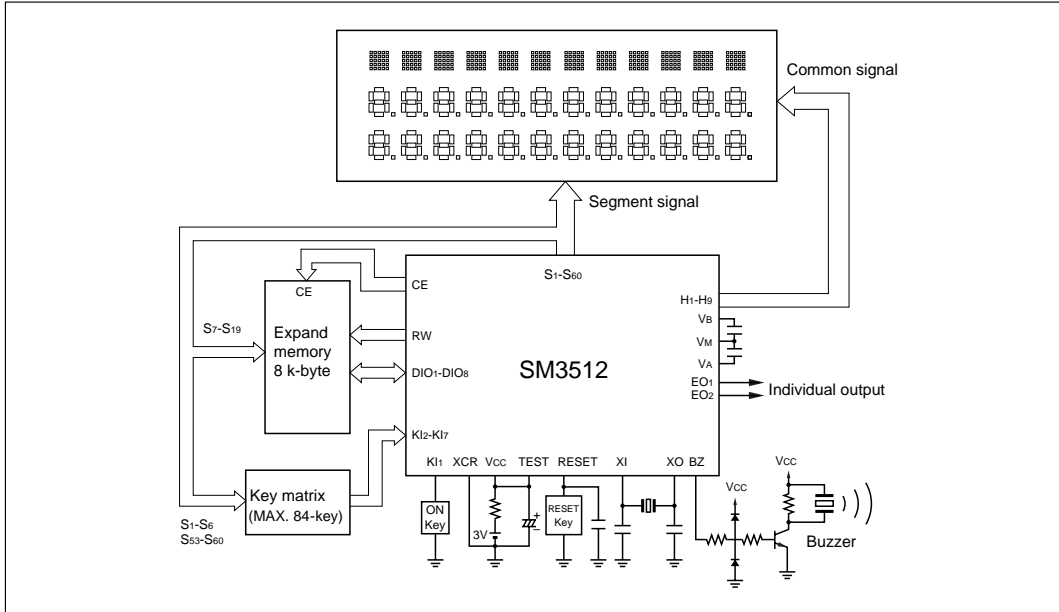
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|---------------|------------------|
| Program ROM | 8 k x 23 bits |
| Character ROM | 5 x 9 x 128 bits |
| Constant ROM | 208 x 4 bits |
- RAM capacity :

| | |
|-------------|--------------|
| Working RAM | 256 x 4 bits |
| Display RAM | 60 x 9 bits |
| Data RAM | 8 k x 8 bits |
- Memory expansion (external) : 8 k x 8 bits
- LCD display : 60-segment x 9-common
- I/O ports :

| | |
|---------------|---------------|
| Parallel I/O | 8 bits |
| Input | 1 bit |
| Output | 2 bits |
| Buzzer output | 1 bit (4 kHz) |
| Key input | 6 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 μ s
- Operating temperature : -10 to +60°C
- Supply voltage : 2.5 to 3.4 V
- Package : 100-pin QFP (QFP100-P-1420)

SYSTEM CONFIGURATION EXAMPLE



100 QFP (QFP100-P-1420)

