

# EPSON 4-bit MCU S1C63558 SPEC

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| Model  | S1C63558  |
| Supply Voltage                                   | 2.2~ 5.5V   |
| OSC1 oscillation circuit                         | 32.768 kHz (Typ.) crystal oscillation circuit   |
| OSC3 oscillation circuit                         | 3.58 MHz (Typ.) ceramic oscillation circuit   |
| Instruction set                                  | Basic instruction: 46 types (411 instructions with all)<br>Addressing mode: 8 types   |
| Instruction execution time<br>(during operation) | At 32.768kHz: 61μsec 122μsec 183μsec<br>At 3.58MHz: 0.56μsec 1.12μsec 1.68μsec  |
| ROM capacity                                     | Code ROM: 8,192 words x 13 bits<br>Data ROM: 2,048 words x 4 bits (=8K bits)  |
| RAM capacity                                     | Data memory: 5,120 words x 4 bits<br>Display memory: 816 bits (192 words x 4bits + 48 x 1 bit)  |
| I/O port   | Input ports: 8 bits (pull-up resistors may be supplemented *1)<br>Output ports: 12 bits (It is possible to switch the 8 bits to special output *2)<br>I/O ports: 16 bits (It is possible to switch 2 bits to special output and the 4 bits to serial I/F input/output *2)   |
| Serial interface                                 | 2 ch. (8-bit clock synchronous or asynchronous system is selectable)  |
| LCD driver                                       | 40 segments x 8, 16 or 17 commons (*2)/ 48 segments x 8 commons (*1)  |
| Time base counter                                | 2 systems (Clock timer, stopwatch timer)  |
| Programmable timer                               | Built-in, 2 inputs x 8 bits, with event counter function  |
| Watchdog timer                                   | Built-in  |
| DTMF generator                                   | Built-in  |
| DP generator                                     | Built-in  |
| FSK demodulator                                  | Built-in (Compatible with ITU-T V.23/ Bell 202)   |
| Sound generator                                  | With envelope and 1-shot output functions   |
| SVD circuit                                      | 12 values, programmable (2.20 to 3.30V)   |
| External interrupt                               | Input port interrupt: 2 systems   |
| Internal interrupt                               | Clock timer interrupt: 4 systems<br>Stopwatch timer interrupt: 2 systems<br>Programmable timer interrupt: 2 systems<br>Serial interface interrupt: 6 systems<br>Dialer interrupt: 1 system<br>FSK interrupt: 2 systems  |
| Operating temperature range                      | -20 to 70°C   |
| Current consumption (Typ.)                       | Low-speed operation (OSC1: crystal oscillation):<br>During HALT (32 kHz) 3.0V (LCD power OFF) 1.5 μA<br>3.0V (LCD power ON) 4 μA<br>During operation (32kHz) 3.0V (LCD power ON) 10 μA<br>High-speed operation (OSC3: ceramic oscillation):<br>During operation (3.58 MHz) 3.0V (LCD power ON) 600 μA<br>During operation 5.5 V (LCD power ON) 1,800 μA |
| Package  | QFP5-128pin (plastic) or chip   |

\*1 Can be selected with mask option.

\*2 Can be selected with software.