

EPSON S1C63656 Spec

OSC1 oscillation circuit	32.768 kHz (Typ.) crystal oscillation circuit
OSC3 oscillation circuit	4 MHz (Max.) ceramic (2 MHz Max. when OSC3 is used as the R/f converter operating clock) or 1.1 MHz (Typ.) CR oscillation circuit)
Instruction set	Basic instruction: 46 types (411 instructions with all) Addressing mode: 8 types
Instruction execution time.....	During operation at 32.768 kHz: 61 μ sec 122 μ sec 183 μ sec During operation at 4 MHz: 0.5 μ sec 1 μ sec 1.5 μ sec
ROM capacity	Code ROM: 6,144 words $\times$ 13 bits Data ROM: 1,024 words $\times$ 4 bits
RAM capacity.....	Data memory: 1,024 words $\times$ 4 bits Display memory: 48 words $\times$ 4 bits
Input port.....	8 bits (Pull-down resistors may be supplemented)
Output port.....	4 bits (It is possible to switch the 2 bits to special output)
I/O port	8 bits (It is possible to switch the 4 bits to serial I/F input/output)
Serial interface.....	1 port (8-bit clock synchronous system)
LCD driver.....	38 segments $\times$ 4 or 3 commons
Time base counter	Clock timer Stopwatch timer (1/1000 sec, with direct key input function)
Programmable timer	8-bit PWM $\times$ 2 ch. or 16-bit PWM $\times$ 1 ch.
Watchdog timer.....	Built-in
Sound generator	With envelope and 1-shot output functions
R/f converter	2 ch., CR oscillation type, 20-bit counter; Supports resistive humidity sensors
Multiply-divide circuit	8-bit accumulator $\times$ 1 ch. Multiplication: 8 bits $\times$ 8 bits $\rightarrow$ 16-bit product Division: 16 bits $\div$ 8 bits $\rightarrow$ 8-bit quotient and 8-bit remainder
Stepping motor driver	2 ch., a clock or watch controller can be implemented
Supply voltage detection (SVD) circuit.....	4 criteria voltages are selectable from 8 types (1.85 to 2.90 V)
External interrupt	Input port interrupt: 2 systems
Internal interrupt	Clock timer interrupt: 5 systems; Stopwatch timer interrupt: 2 systems; Programmable timer interrupt: 4 systems; Serial interface interrupt: 1 system; R/f converter interrupt: 2 systems; Motor driver interrupt: 2 systems
Power supply voltage.....	2.4 to 3.6 V: Max. 4 MHz operation (when OSC3 is used); 1.8 to 3.6 V: 32 kHz operation (when OSC3 is not used)
Operating temperature range	-20 to 70°C
Current consumption (Typ.)	Low-speed operation (OSC1 = 32 kHz crystal oscillation):
Package	QFP20-144pin (plastic) or chip