

□ MN101C167 , MN101C169 , MN101C16A , MN101C38A , MN101C38C

Type		MN101C167 , MN101C169 , MN101C16A , MN101C38A , MN101C38C (MN101C167 and MN101C169 are under planning. The others are in production.)
ROM (×8-Bit)		16K / 24 K / 32 K / 32 K / 48 K (External memory can be expanded)
RAM (×8-Bit)		1 024 / 1 536 / 1 536 / 1 536 / 2 048 (External memory can be expanded)
Minimum Instruction Execution Time		0.25 μ s (at 2.7 V to 5.5 V, 8 MHz) 125 μ s (at 2.0 V to 5.5 V, 32 kHz)
Interrupts		• RESET • Watchdog • External 0 • External 1 • External 2 • External 3 • External 4 • Timer 2 • Timer 3 • Timer 4 • Timer 5 • Time Base • Serial 0 • Serial 1 • A/D Conversion finish
Timer Counter		<p>Timer Counter 2 : 8-Bit × 1 (Square-Wave/8-Bit PWM Output, Event Count, Synchronous Output Event) Clock Source 1/1, 1/4 of System Clock, 1/1 of XI Oscillation Clock, External Clock Input Interrupt Source Coincidence with Compare Register 2</p> <p>Timer Counter 3 : 8-Bit × 1 (Square-Wave Output, Event Count, Generation of Remote Control Carrier, Serial 0 Baud Rate Timer) Clock Source 1/4, 1/16 of System Clock, 1/1 of OSC Oscillation Clock, External Clock Input Interrupt Source Coincidence with Compare Register 3</p> <p>Timer Counter 2, 3 can be cascade-connected.</p> <p>Timer Counter 4 : 16-Bit × 1 (Square-Wave/16-Bit PWM Output, Event Count, Synchronous Output Event, Input Capture) Clock Source 1/4, 1/16 of System Clock, 1/1 of OSC Oscillation Clock, External Clock Input Interrupt Source Coincidence with Compare Register 4</p> <p>Time Base Timer (One-Minute Count Setting, Independently operable 8-Bit Timer Counter 5) Clock Source 1/4 of System Clock, 1/1, 1/8192 of OSC Oscillation Clock, 1/1, 1/8192 of XI Oscillation Clock Interrupt Source Coincidence with Compare Register 5, 1/8192 Prescaler Overflow</p> <p>Watchdog Timer Interrupt Source 1/65536, 1/262144, 1/1048576 of System Clock (Mask Option)</p>
Serial Interface		<p>Serial 0 : 8-Bit × 1 (Synchronous Type/Simple UART[Half-Duplex]) Clock Source 1/2, 1/4, 1/16 of System Clock, 1/2 of Timer Counter 3</p> <p>Serial 1 : 8-Bit × 1 (Synchronous Type) Clock Source 1/2, 1/8, 1/64 of System Clock, 1/2 of Timer Counter 3</p>
I/O Pins	I/O	44 • Common use • Specified pull-up Resistor available • Input/Output selectable (bit unit) • Specified pull-down resistor partially selectable
	Input	13 • Common use • Specified pull-up Resistor available • Specified pull-down resistor partially selectable
A/D Inputs		10-Bit × 8ch (with S/H)
LCD		• 52 segment • 4 common • Static • 1/2, 1/3 or 1/4 duty
Special Ports		Buzzer Output, Remote Control Carrier Signal Output, High-Current Drive Port
Package		QFP100-P-1818B, LQFP100-P-1414

Electrical Characteristics

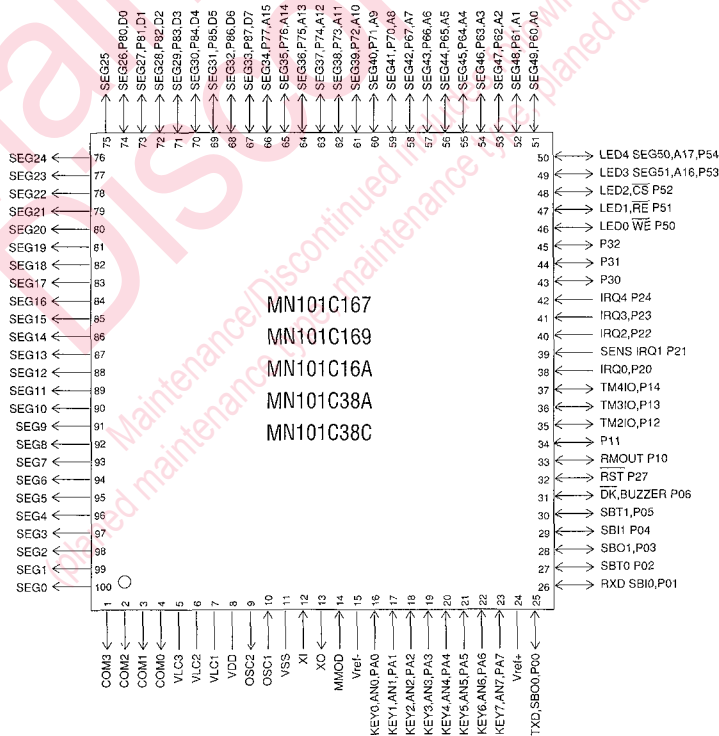
Supply Current

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating Supply Current	IDD1	fosc = 8 MHz, VDD = 5 V		10	25	mA
	IDD2	fx = 32 kHz, VDD = 3 V		30	100	μA
Supply Current at HALT	IDD3	fx = 32 kHz, VDD = 3 V, Ta = 25 °C			8	μA
	IDD4	fx = 32 kHz, VDD = 3 V, Ta = -40 °C to +85 °C			24	μA
Supply Current at STOP	IDD5	VDD = 5 V, Ta = 25 °C			1	μA
		VDD = 5 V, Ta = -40 °C to +85 °C			20	μA

Support Tool

In-Circuit Emulator	PX-ICE101C / D + PX-PRB101C16-C / D
EPROM built-in Type	Type: MN101CP03D , MN101CP38C [ES (Engineering Sample) available]
	ROM (× 8-Bit): 64 K / 48 K
	RAM (× 8-Bit): 2 048 / 2 048
	Minimum Instruction Execution Time: 0.25 μs (at 4.5 V to 5.5 V, 8 MHz)
	125 μs (at 2.7 V to 5.5 V, 32 kHz)
	Package: QFP100-P-1818B, LQFP100-P-1414

Pin Assignment



QFP100-P-1818B, LQFP100-P-1414

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