❑ MN101C38 Series

Type	MN101C38A	MN101C38C	MN101CP38C
Internal ROM type	Mask ROM		EPROM
ROM (byte)	32K	48K	
RAM (byte)	1.5K	2K	
Package (Lead-free)	LQFP100-P-1414, QFP100-P-1818B		
Minimum Instruction Execution Time	0.1 µs (at 4.5 V to 5.5 V, 20 MHz) 0.25 µs (at 2.7 V to 5.5 V, 8 MHz) 125 µs (at 2.0 V to 5.5 V, 32 kHz)* *: The lower limit for operation guarantee for EPROM built-in type is 2.3 V.		

■ Interrupts

RESET. Watchdog. External 0 to 4. Timer 2 to 5. Time base. Serial 0. Serial 1. A/D conversion finish

■ Timer Counter

8-bit timer × 2

Timer 2 .....Square-wave/8-bit PWM output. Event count. Synchronous output event

Timer 3 .....Square-wave output. Event count. Remote control carrier output. Serial 0 baud rate timer

Timer 2, 3 can be cascade-connected

16-bit timer × 1

Timer 4 .....Square-wave/16-bit PWM output. Event count. Synchronous output event. Input capture

Time base timer: One-minute count setting. Independently operable 8-bit timer 5

Watchdog timer × 1

■ Serial interface

Synchronous type/Simple UART (half-duplex) × 1: Serial 0

Synchronous type × 1: Serial 1

■ 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 converter

10-bit × 8 channels (with S/H)

■ Display control function

LCD: 52 segments × 4 commons (Static, 1/2, 1/3, or 1/4 duty)

■ Special Ports

Buzzer output. Remote control carrier output. High-current drive port

■ Electrical Charactreistics (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

■ Development tools

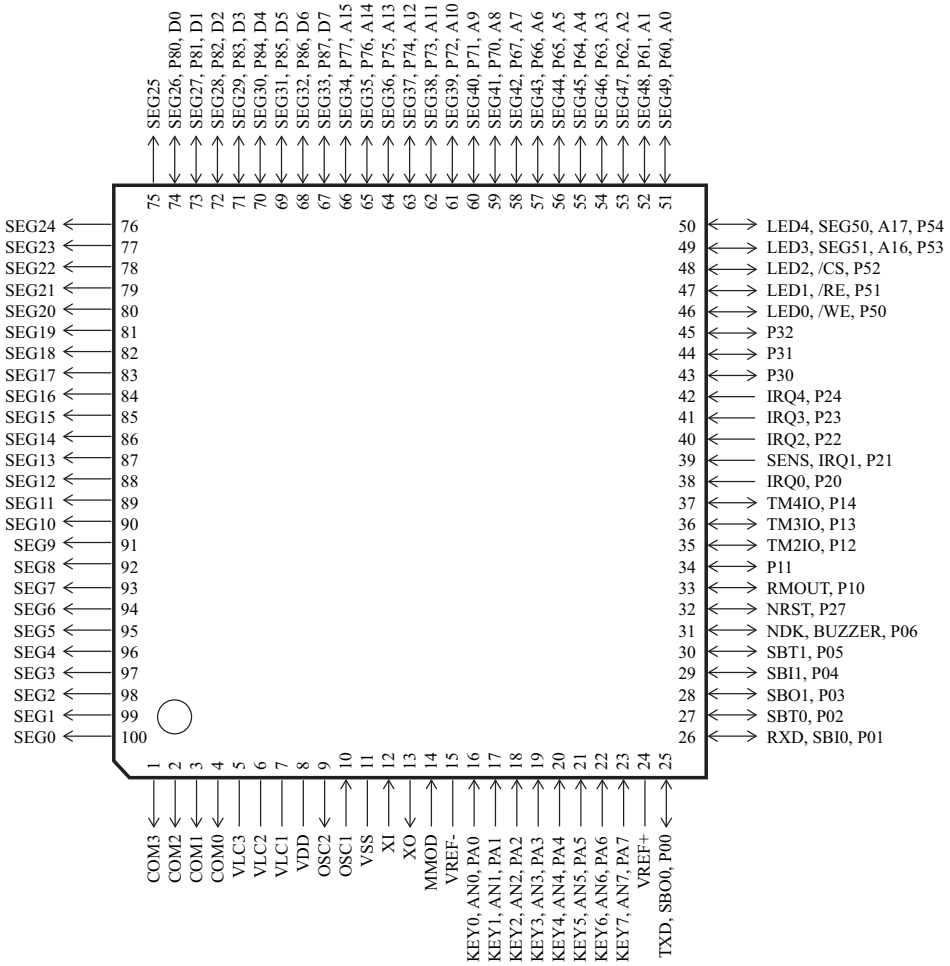
In-circuit Emulator

PX-ICE101C/D + PX-PRB101C38-QFP100-P-1818B

PX-ICE101C/D + PX-PRB101C38-LQFP100-P-1414

■ Pin Assignment

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



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Even when the products are used within the guaranteed values, take into the consideration of incidence of break down and failure mode, possible to occur to semiconductor products. Measures on the systems such as redundant design, arresting the spread of fire or preventing glitch are recommended in order to prevent physical injury, fire, social damages, for example, by using the products.

(6) Comply with the instructions for use in order to prevent breakdown and characteristics change due to external factors (ESD, EOS, thermal stress and mechanical stress) at the time of handling, mounting or at customer's process. When using products for which damp-proof packing is required, satisfy the conditions, such as shelf life and the elapsed time since first opening the packages.