

□ MN101C28 Series

Type	MN101C28A	MN101C28C	MN101C28D	MN101C28F	MN101C28L	MN101CP28D	MN101CP28L
Internal ROM type	Mask ROM					EPROM	
ROM (byte)	32K	48K	64K	96K		64K	96K
RAM (byte)	1.5K	2K		4K	10K	2K	10K
Package (Lead-free)	LQFP080-P-1414A, QFP084-P-1818E, TQFP080-P-1212D			LQFP080-P-1414A		LQFP080-P-1414A, QFP084-P-1818E, TQFP080-P-1212D	LQFP080-P-1414A
Minimum Instruction Execution Time	0.10 μs (at 4.5 V to 5.5 V, 20 MHz) 0.238 μs (at 2.6 V to 5.5 V, 8.39 MHz) 0.333 μs (at 2.3 V to 5.5 V, 6 MHz) 1.00 μs (at 2.0 V to 5.5 V, 2 MHz)* 125 μs (at 2.0 V to 5.5 V, 32.768 kHz)* *: The lower limit for operation guarantee for EPROM built-in type is 2.3 V.						

■ Interrupts

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

■ Timer Counter

8-bit timer × 4

Timer 0Square-wave/8-bit PWM output. Event count. Remote control carrier output

Timer 1Square-wave output. Event count. Synchronous output event

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

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

Timer 0, 1 can be cascade-connected

Timer 2, 3 can be cascade-connected

16-bit timer × 1

Timer 4Square-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

Synchronous type/Single-master I²C × 1: Serial 2

■ I/O Pins

I/O 57: Common use. Specified pull-up resistor available. Input/output selectable (bit unit)

Input 13: Common use. Specified pull-up resistor available

■ A/D converter

10-bit × 8 channels (with S/H)

■ Special Ports

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

■ Electrical Characteristics (Supply current)

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating supply current	IDD1	fosc = 20 MHz. VDD = 5 V		25	50	mA
	IDD2	fx = 32.768 kHz. VDD = 3 V		40	120	μA
Supply current at HALT	IDD3	fx = 32.768 kHz. VDD = 3 V. Ta = 25 °C		4	8	μA
		fx = 32.768 kHz. VDD = 3 V. Ta = 85 °C			20	μA
Supply current at STOP	IDD4	VDD = 5 V. Ta = 25 °C			1	μA
		VDD = 5 V. Ta = -40 °C to +85 °C			30	μA

■ Development tools

In-circuit Emulator

PX-ICE101C/D + PX-PRB101C28-TQFP080-P-1212

PX-ICE101C/D + PX-PRB101C28-QFP084-P-1818E

PX-ICE101C/D + PX-PRB101C28-LQFP080-P-1414A

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