

MN101C246 / 249

Type			MN101C246 (under planning) / 249
ROM (x8-bit)			12K/24K (External memory can be expanded)
RAM (x8-bit)			1024/1024 (External memory can be expanded)
Minimum Instruction Execution Time			0.10 μs (at 4.5 to 5.5V, 20MHz) 0.25 μs (at 2.7 to 5.5V, 8MHz) 125 μs (at 2.0 to 5.5V, 32kHz)*
			* The lower limit for operation guarantee for EPROM built-in version is 2.7V.
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			Timer Counter 2 : 8-bit x 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 Timer Counter 3 : 8-bit x 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 Timer Counter 2, 3 can be cascade-connected. Timer Counter 4 : 16-bit x 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 Time Base Timer (One-minute Count Setting, Five independently operable 8-bit Timer Counter) 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 Watchdog Timer Interrupt Source . . . 1/65536, 1/262144, 1/1048576 of System Clock (ROM Option)
Serial Interface			Serial 0 : 8-bit x 1 (Synchronous Type/Simple UART[Half-duplex]) Clock Source . . . 1/2, 1/4, 1/16 of System Clock, 1/2 of Timer Counter 3 Serial 1 : 8-bit x 1 (Synchronous Type) Clock Source . . . 1/2, 1/8, 1/64 of System Clock, 1/2 of Timer Counter 3
I/O Pins	I/O	49	• Common use • Specified pull-up Resistor available • Input/Output selectable (bit unit) • Specified pull-down resistor partially selectable
	Input	12	• Common use • Specified pull-up Resistor available • Pull-down resistor partially selectable

A/D Inputs	10-bit x 8ch (with S/H)
LCD	• 28 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	TQFP080-P-1212
Electrical Characteristics	

Supply Current

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating Supply Current	IDD1	fosc = 8MHz, VDD = 5V		10	25	mA
	IDD2	fx = 32kHz, VDD = 3V		15	100	μA
Supply Current at HALT	IDD3	fx = 32kHz, VDD = 3V, Ta = 25°C			8	μA
	IDD4	fx = 32kHz, VDD = 3V, Ta = -40 to +85°C			30	μA
Supply Current at STOP	IDD5	VDD = 5V, Ta = 25°C			1	μA
		VDD = 5V, Ta = -40 to +85°C			25	μA

Support Tool

In-Circuit Emulator		PX-ICE101C / D + PX-PRB101C24-C / D	
EPROM built-in Type	Type	MN101CP249 [ES (Engineering Sample) available]	
	ROM (x 8-bit)	24K	
	RAM (x 8-bit)	1024	
	Minimum Instruction Execution Time	0 10μs (at 4 5 to 5.5V, 20MHz)	
		0 25μs (at 2 7 to 5 5V, 8MHz)	
		125μs (at 2 35 to 5 5V, 32kHz)	
Package	TQFP080-P-1212		

Pin Assignment

