

MN101C115 , MN101C117

Type		MN101C115 , MN101C117	
ROM (×8-Bit)		8 K / 16 K	
RAM (×8-Bit)		256 / 512	
Minimum Instruction Execution Time		0.10 μs (at 4.5 V to 5.5 V, 20 MHz) 0.25 μs (at 2.7 V to 5.5 V, 8 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 kHz)*	
* The lower limit for operation guarantee for EPROM built-in version is 2.7 V.			
Interrupts		• RESET • Watchdog • External 0 • External 1 • External 2 • External 3 (Only 48-pin package) • Timer 2 • Timer 3 • Timer 4 • Timer 5 • Time Base • Serial 0 • A/D Conversion finish	
Timer Counter		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 (Only 48-pin package), External Clock Input Interrupt Source Coincidence with Compare Register 2 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 Timer Counter 2, 3 can be cascade-connected. 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 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 (Only 48-pin package) 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 × 1 (Synchronous Type/Simple UART[Half-Duplex]) Clock Source 1/2, 1/4, 1/16 of System Clock 1/2 of Timer Counter 3	
I/O Pins	I/O	27	• Common use 7 • Specified pull-up Resistor available • Input/Output selectable (bit unit) 26 (for 44-pin), 25 (for 42-pin)
	Input	12	• Common use • Specified pull-up Resistor available

Main Document (planned maintenance) includes lifecycle status, planned maintenance, discontinued, discontinued type

A/D Inputs	10-Bit × 8ch (with S/H)
Special Ports	Buzzer Output, Remote Control Carrier Signal Output, High-Current Drive Port
Package	SDIP042-P-0600, QFP044-P-1010, QFH048-P-0707
Electrical Characteristics	

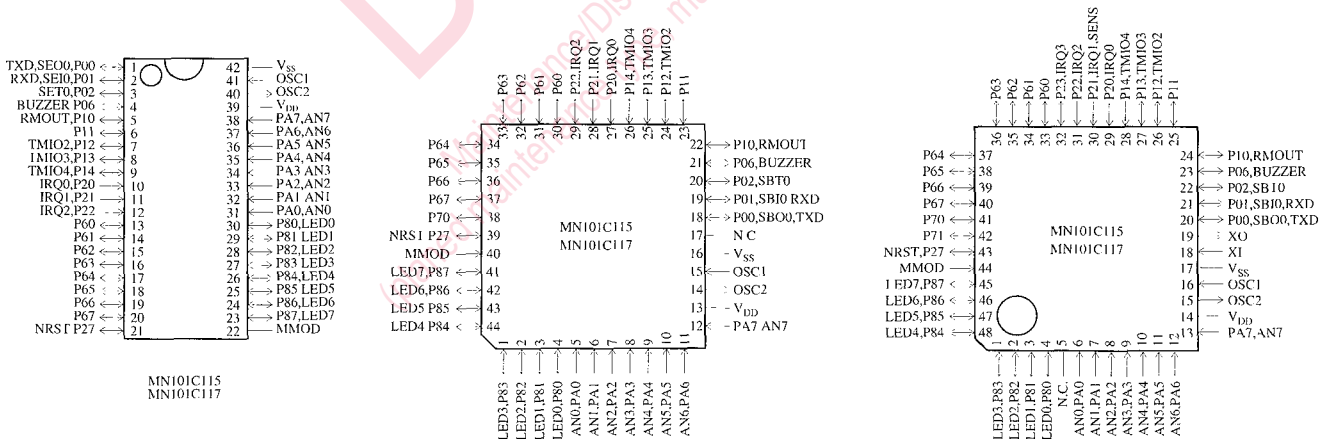
Supply Current

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating Supply Current	IDD1	fosc = 20 MHz, VDD = 5 V			60	mA
	IDD2	fosc = 8 39 MHz, VDD = 5 V			25	mA
	IDD3	fx = 32 kHz, VDD = 3 V			100	μA
Supply Current at HALT	IDD4	fx = 32 kHz, VDD = 3 V, Ta = 25 °C			8	μA
	IDD5	fx = 32 kHz, VDD = 3 V, Ta = -40 °C to +85 °C			18	μA
Supply Current at STOP	IDD6	VDD = 5 V, Ta = 25 °C			2	μA
		VDD = 5 V, Ta = -40 °C to +85 °C			20	μA

Support Tool

In-Circuit Emulator	PX-ICE101C / D + PX-PRB101C11-44QF10-C / D PX-ICE101C / D + PX-PRB101C11-42SD-C / D PX-ICE101C / D + PX-PRB101C11-48QF7-C / D										
EPROM built-in Type	<table border="1"> <tr> <td>Type</td> <td>MN101CP117DP, MN101CP117BF, MN101CP117HP [ES (Engineering Sample) available]</td> </tr> <tr> <td>ROM (× 8-Bit)</td> <td>16 K</td> </tr> <tr> <td>RAM (× 8-Bit)</td> <td>512</td> </tr> <tr> <td>Minimum Instruction Execution Time</td> <td>0 10 μs (at 4 5 V to 5 5 V, 20 MHz) 0 25 μs (at 2 7 V to 5 5 V, 8 MHz)</td> </tr> <tr> <td>Package</td> <td>SDIP042-P-0600, QFP044-P-1010, QFH048-P-0707</td> </tr> </table>	Type	MN101CP117DP, MN101CP117BF, MN101CP117HP [ES (Engineering Sample) available]	ROM (× 8-Bit)	16 K	RAM (× 8-Bit)	512	Minimum Instruction Execution Time	0 10 μs (at 4 5 V to 5 5 V, 20 MHz) 0 25 μs (at 2 7 V to 5 5 V, 8 MHz)	Package	SDIP042-P-0600, QFP044-P-1010, QFH048-P-0707
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Pin Assignment



SDIP042-P-0600

QFP044-P-1010

QFH048-P-0707

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