

□ MN101C425 , MN101C427

Type	MN101C425		MN101C427	
ROM (x8-bit)	8 K		16 K	
RAM (x8-bit)	0.25 K		0.5 K	
Package (Old Package)	SDIP042-P-0600C *Pb free, QFP044-P-1010E *Pb free, TQFP048-P-0707B *Pb free (SDIP042-P-0600)			
Minimum Instruction Execution Time	0.10 μs (at 4.5 V to 5.5 V, 20 MHz) 0.238 μs (at 2.7 V to 5.5 V, 8.39 MHz) 0.477 μs (at 2.0 V to 5.5 V, 4.19 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 2.7 V.			
Interrupts	<ul style="list-style-type: none"> • 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	<p>Timer counter 2 : 8-bit × 1 (square-wave/8-bit PWM output, event count, synchronous output event)</p> <p>Clock source 1/1, 1/4 of system clock frequency; 1/1 of XI oscillation clock frequency (only 48-pin package); external clock input</p> <p>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)</p> <p>Clock source 1/4, 1/16 of system clock frequency; 1/1 of OSC oscillation clock frequency; external clock input</p> <p>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)</p> <p>Clock source 1/4, 1/16 of system clock frequency; 1/1 of OSC oscillation clock frequency; external clock input</p> <p>Interrupt source coincidence with compare register 4</p> <p>Time base timer (one-minute count setting, independently operable 8-bit timer counter 5)</p> <p>Clock source 1/4 of system clock frequency; 1/1, 1/8192 of OSC oscillation clock frequency; 1/1, 1/8192 of XI oscillation clock frequency (only 48-pin package)</p> <p>Interrupt source coincidence with compare register 5; 1/8192 prescaler overflow</p> <p>Watchdog timer</p> <p>Interrupt source 1/65536, 1/262144, 1/1048576 of system clock frequency (ROM option)</p>			
Serial Interface	Serial 0 : synchronous type/simple UART (half-duplex) × 1 Clock source 1/2, 1/4, 1/16 of system clock frequency; output of timer counter 3			
I/O Pins	I/O	27	<ul style="list-style-type: none"> • Common use : 16 • Specified pull-up resistor available • Input/output selectable (bit unit): 26 (for 44-pin), 25 (for 42-pin) 	
	Input	12	<ul style="list-style-type: none"> • Common use • Specified pull-up resistor available 	
A/D Inputs	10-bit × 8-ch. (with S/H)			
Special Ports	Buzzer output, remote control carrier signal output, high-current drive port			

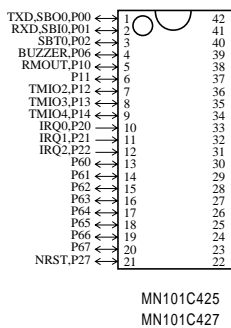
Electrical Characteristics

Supply current

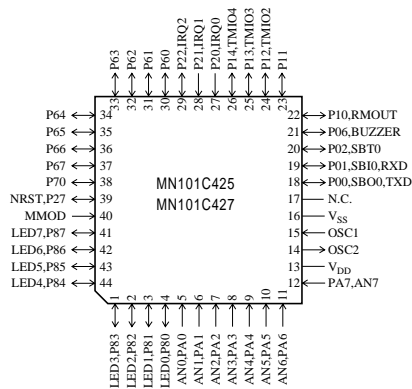
Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating supply current	IDD1	fosc = 20 MHz, VDD = 5 V		15	40	mA
	IDD2	fosc = 8.39 MHz, VDD = 5 V		6	18	mA
	IDD3	fx = 32.768 kHz, VDD = 3 V			100	µA
Supply current at HALT	IDD4	fx = 32.768 kHz, VDD = 3 V, Ta = 25°C			8	µA
	IDD5	fx = 32.768 kHz, VDD = 3 V, Ta = -40°C to +85°C			18	µA
Supply current at STOP	IDD6	VDD = 5 V, Ta = 25°C		0	2	µA
		VDD = 5 V, Ta = -40°C to +85°C		0	20	µA

Pin Assignment

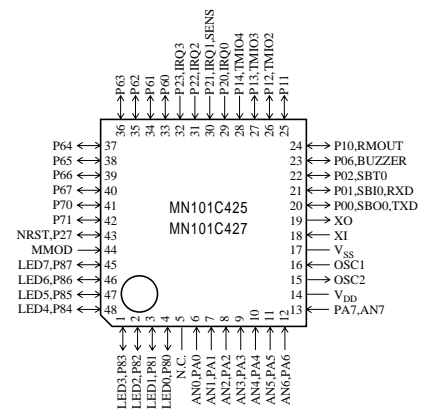
() : Old Package



SDIP042-P-0600C *Pb free
(SDIP042-P-0600)



QFP044-P-1010E *Pb free



TQFP048-P-0707B *Pb free

Support Tool

In-circuit Emulator

- PX-ICE101C/D+PX-PRB101C42-QFP044-P-1010
- PX-ICE101C/D+PX-PRB101C42-TQFP048-P-0707B
- PX-ICE101C/D+PX-PRB101C42-SDIP042-P-0600

EPROM Built-in Type

Type	MN101CP427DP , MN101CP427BF , MN101CP427HT
ROM (× 8-bit)	16 K
RAM (× 8-bit)	0.5 K
Minimum instruction execution time	0.10 µs (at 4.5 V to 5.5 V, 20 MHz)
	0.238 µs (at 2.7 V to 5.5 V, 8.39 MHz)
Package	[All Pb free] SDIP042-P-0600C, QFP044-P-1010E, TQFP048-P-0707B
(Old Package)	(SDIP042-P-0600)

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