❑ MN101C425 , MN101C427

Type		MN101C425	MN101C427
ROM (×8-bit)		8 K	16 K
RAM (×8-bit)		0.25 K	0.5 K
Package (Conventional Package)		SDIP042-P-0600C *Lead-free, QFP044-P-1010E *Lead-free, TQFP048-P-0707B *Lead-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		• 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 frequency; 1/1 of XI oscillation clock frequency (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 frequency; 1/1 of OSC oscillation clock frequency; 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 frequency; 1/1 of OSC oscillation clock frequency; external clock input Interrupt source ····· coincidence with compare register 4 Time base timer (one-minute count setting, independently operable 8-bit timer counter 5) 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) Interrupt source ····· coincidence with compare register 5; 1/8192 prescaler overflow Watchdog timer Interrupt source ····· 1/65536, 1/262144, 1/1048576 of system clock frequency (ROM option)	
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	• Common use: 16 • 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
A/D Inputs		10-bit × 8-ch. (with S/H)	
Special Ports		Buzzer output, remote control carrier signal output, high-current drive port	

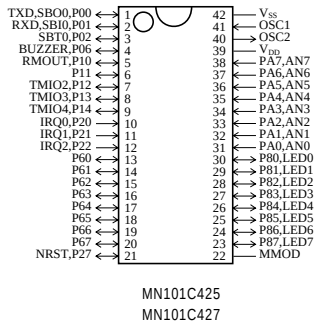
Electrical Characteristics

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			2	µA
		VDD = 5 V, Ta = –40°C to +85°C			20	µA

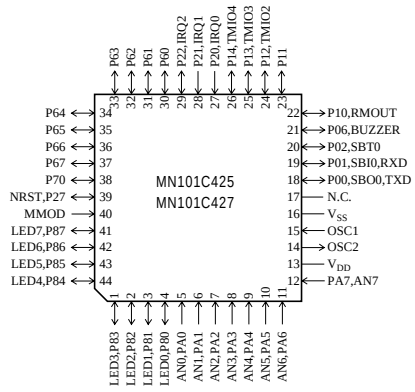
Pin Assignment

( ) : Conventional Package

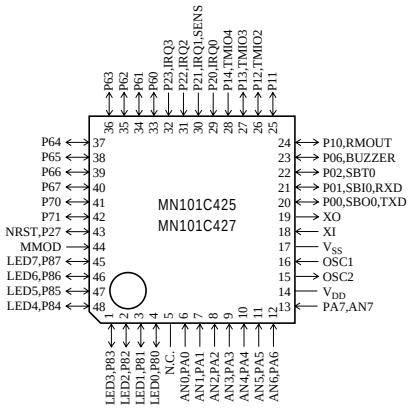


SDIP042-P-0600C *Lead-free

(SDIP042-P-0600)



QFP044-P-1010E *Lead-free



TQFP048-P-0707B *Lead-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 (Conventional Package)	[All lead-free] SDIP042-P-0600C, QFP044-P-1010E, TQFP048-P-0707B (SDIP042-P-0600)

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