

□ MN101C97 Series

Type	MN101C97A	MN101C97D	MN101CF97D
Internal ROM type	Mask ROM		FLASH
ROM (byte)	32K	64K	
RAM (byte)	1K		
Package (Lead-free)	QFP044-P-1010F, TQFP048-P-0707B		
Minimum Instruction Execution Time	0.25 μ s (at 2.2 V to 3.6 V, 8 MHz) 0.5 μ s (at 1.8 V to 3.6 V, 4 MHz) 62.5 μ s (at 1.8 V to 3.6 V, 32 kHz)		

■ Interrupts

RESET. Watchdog. External 0 to 5. External 6 (key interrupt dedicated). Timer 0 to 3. Timer 6. Timer 7 (2 systems). Time base. Serial 0 (2 systems). Serial 3. A/D conversion finish

■ Timer Counter

8-bit timer \times 5

Timer 0Square-wave/8-bit PWM output. Event count. Remote control carrier output. Simple pulse width measurement. Added pulse (2-bit) type PWM output. Square-wave/PWM output to large current terminal P51 possible

Timer 1Square-wave output. Event count. Synchronous output event. Serial 0 baud rate timer

Timer 2Square-wave output. Added pulse (2-bit) type PWM output. PWM output. Serial transfer clock output. Event count. Synchronous output event. Simple pulse width measurement. Serial 0 and Serial 3 baud rate timer. Square-wave/PWM output to large current terminal P52 possible

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

Timer 68-bit freerun timer

Timer 0, 1 can be cascade-connected

Timer 2, 3 can be cascade-connected

16-bit timer \times 1

Timer 7Square-wave output. 16-bit PWM output (cycle/duty continuous variable). Event count. Synchronous output event. Pulse width measurement. Input capture. Real time output control. Square-wave/PWM output to large current terminal P53 possible

Time base timer: One-minute count setting

Watchdog timer \times 1

■ Serial interface

Synchronous type/UART (full-duplex) \times 1: Serial 0

Synchronous type/Single-master I²C \times 1: Serial 3

■ I/O Pins

I/O 38 : Common use. Specified pull-up resistor available. Input/output selectable (bit unit) (TQFP048-P-0707B)

34 : (QFP044-P-1010F)

■ A/D converter

10-bit \times 8 channels (with S/H)

■ Special Ports

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

■ ROM Correction

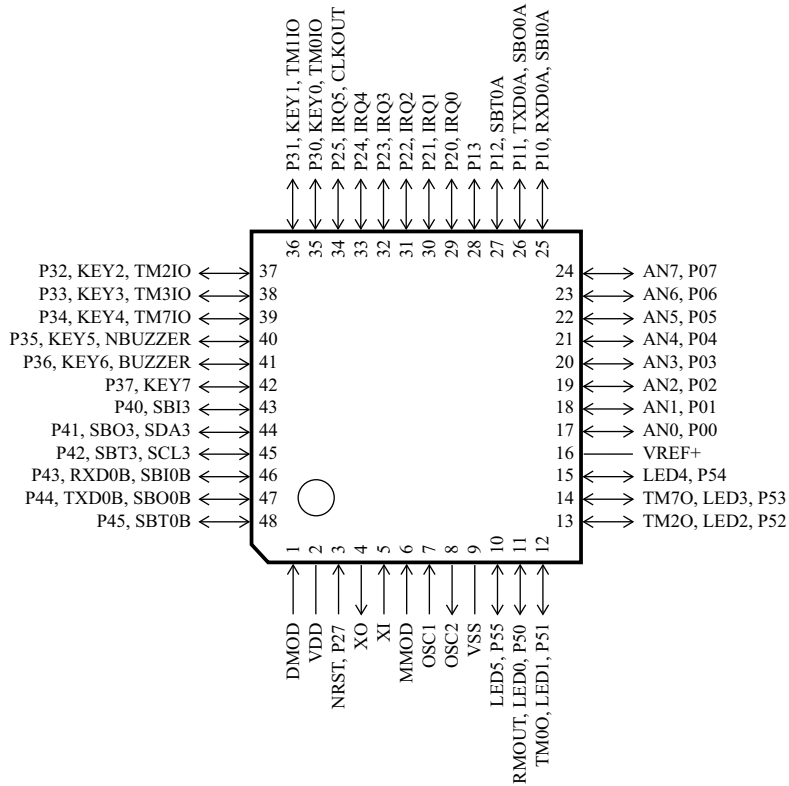
Correcting address designation: Up to 3 addresses possible

■ Electrical Characteristics (Supply current)

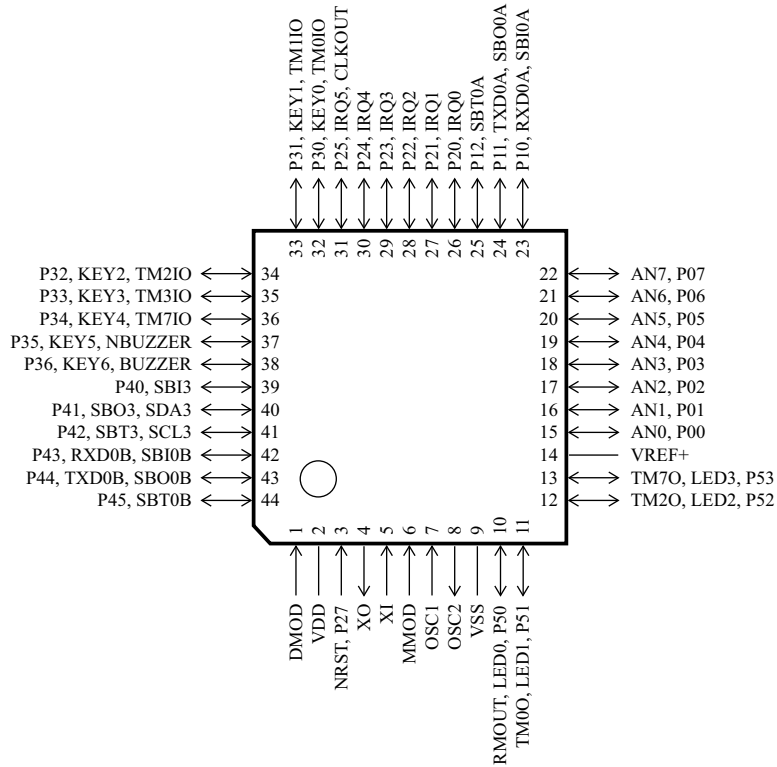
Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating supply current	IDD1	$f_{osc} = 4 \text{ MHz}$. $V_{DD} = 3 \text{ V}$		0.9	1.7	mA
	IDD2	$f_x = 32 \text{ kHz}$. $V_{DD} = 3 \text{ V}$		4	24	μ A
Supply current at HALT	IDD3	$f_x = 32 \text{ kHz}$. $V_{DD} = 3 \text{ V}$. $T_a = 25 \text{ }^\circ\text{C}$		2.6	5	μ A
	IDD4	$f_x = 32 \text{ kHz}$. $V_{DD} = 3 \text{ V}$. $T_a = -40 \text{ }^\circ\text{C}$ to $+85 \text{ }^\circ\text{C}$			20	μ A
Supply current at STOP	IDD5	$V_{DD} = 3 \text{ V}$. $T_a = 25 \text{ }^\circ\text{C}$			2	μ A
	IDD6	$V_{DD} = 3 \text{ V}$. $T_a = -40 \text{ }^\circ\text{C}$ to $+85 \text{ }^\circ\text{C}$			15	μ A

Note) Limit: Mask ROM version

■ Pin Assignment
TQFP048-P-0707B



QFP044-P-1010F



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