

## **Notification about the transfer of the semiconductor business**

The semiconductor business of Panasonic Corporation was transferred on September 1, 2020 to Nuvoton Technology Corporation (hereinafter referred to as "Nuvoton"). Accordingly, Panasonic Semiconductor Solutions Co., Ltd. became under the umbrella of the Nuvoton Group, with the new name of Nuvoton Technology Corporation Japan (hereinafter referred to as "NTCJ").

In accordance with this transfer, semiconductor products will be handled as NTCJ-made products after September 1, 2020. However, such products will be continuously sold through Panasonic Corporation.

Publisher of this Document is NTCJ.

If you would find description "Panasonic" or "Panasonic semiconductor solutions", please replace it with NTCJ.

※ Except below description page

"Request for your special attention and precautions in using the technical information and semiconductors described in this book"

**Nuvoton Technology Corporation Japan**

# □ MN101CA2 Series

Type	MN101CA27	MN101CFA2D
Internal ROM type	Mask ROM	FLASH
ROM (byte)	16K	64K
RAM (byte)	0.5K	2K
Package (Lead-free)	LQFP064-P-1414	
Minimum Instruction Execution Time	0.25 $\mu$ s (at 2.7 V to 3.6 V, 8 MHz) 0.50 $\mu$ s (at 1.8 V to 3.6 V, 4 MHz) 62.5 $\mu$ s (at 1.8 V to 3.6 V, 32 kHz)	

## ■ Interrupts

RESET. Watchdog. External 2. External 6. Timer 0. Timer 1. Timer 6. Time base

## ■ Timer Counter

8-bit timer  $\times$  2

Timer 0 .....Square-wave/8-bit PWM output. Simple pulse width measurement

Timer 1 .....Square-wave output

Timer 0, 1 can be cascade-connected

Time base timer: One-minute count setting

Watchdog timer  $\times$  1

Remote control carrier output

## ■ I/O Pins

I/O 16 : Common use. Specified pull-up resistor available. Input/output selectable (bit unit)

Input 9 : Common use. Specified pull-up resistor available

## ■ Display control function

LCD: 32 segments  $\times$  4 commons (1/3 or 1/4 duty)

## ■ Special Ports

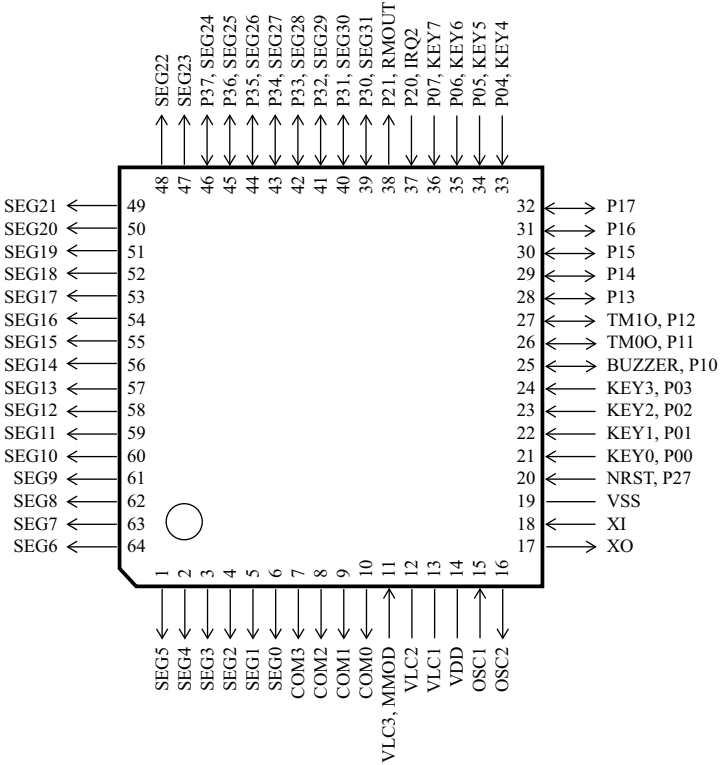
Buzzer output. Remote control carrier output. High-current drive port

## ■ Electrical Characteristics (Supply current)

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating supply current	IDD1	$f_{osc} = 8 \text{ MHz}$ . $V_{DD} = 3 \text{ V}$		1.0	1.8	mA
	IDD2	$f_x = 32 \text{ kHz}$ . $V_{DD} = 3 \text{ V}$		4.8	17	$\mu$ A
Supply current at HALT	IDD3	$f_x = 32 \text{ kHz}$ . $V_{DD} = 3 \text{ V}$ . $T_a = 25 \text{ }^\circ\text{C}$		2.7	5	$\mu$ A
	IDD4	$f_x = 32 \text{ kHz}$ . $V_{DD} = 3 \text{ V}$ . $T_a = 70 \text{ }^\circ\text{C}$			13	$\mu$ A
Supply current at STOP	IDD5	$V_{DD} = 3 \text{ V}$ . $T_a = 25 \text{ }^\circ\text{C}$			2	$\mu$ A
		$V_{DD} = 3 \text{ V}$ . $T_a = 70 \text{ }^\circ\text{C}$			8	$\mu$ A

Note) Limit: Mask ROM version

■ Pin Assignment  
LQFP064-P-1414



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