❑ MN101E49 Series

Type	MN101E49K	MN101EF49N
Internal ROM type	Mask ROM	FLASH
ROM (byte)	256K	512K
RAM (byte)	12K	30K
Package (Lead-free)	LQFP100-P-1414	
Minimum Instruction Execution Time	79.4 ns (at 2.7 V to 3.6 V, 12.58 MHz)	

■ Interrupts

RESET. Watchdog. External 0 to 5. Timer 0 to 3. Timer 6. Timer 7 (2 systems). Timer A to E. Time base. Serial 0 (2 systems). Serial 1 (2 systems). Serial 2. Serial 3 (2 systems). Serial 4 (2 systems). Automatic transfer finish (2 systems). A/D conversion finish. Key interrupt. IEBus*

* IEBus is a trademark of NEC Electronics Corporation.

■ Timer Counter

8-bit timer × 10

Timer 0 .....Square-wave/8-bit PWM output. Event count. Pulse width measurement. Real time output control

Timer 1 .....Square-wave output. Event count. Synchronous output event

Timer 2 .....Square-wave/8-bit PWM output. Event count. Synchronous output event. Pulse width measurement. Real time output control. Serial baud rate timer

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

Timer 6 .....8-bit freerun timer. Time base timer

Timer A, B, C, D, E

Timer 0, 1 can be cascade-connected

Timer 0, 1, 2 can be cascade-connected

Timer 2, 3 can be cascade-connected

Timer 0, 1, 2, 3 can be cascade-connected

16-bit timer × 1

Timer 7 .....Square-wave/16-bit PWM output (cycle/duty continuous variable). Event count. Synchronous output event. Pulse width measurement. Input capture

Time base timer: One-minute count setting

Watchdog timer × 1

■ Serial interface

Synchronous type/UART (full-duplex) × 3: Serial 0, 1, 4

Synchronous type/Single-master I^2C × 1: Serial 2

Synchronous type/I^2C × 1: Serial 3

■ IEBus Interface

Number of channels: 1 channels

Communication mode: Selectable from mode 1 or mode 2

Driver and receiver: External

■ DMA controller

Number of channels: 2 channels

Maximum transfer cycles: 255

Starting factor: External request. Various types of interrupt. Software

Transfer mode: 1-byte transfer. Word transfer. Burst transfer

■ I/O Pins

I/O 22 : (5 V I/F port) Common use. Specified pull-up resistor available. Input/output selectable (bit unit)

62 : (3 V I/F port) Common use. Specified pull-up resistor available. Input/output selectable (bit unit)

1 : (3 V I/F port) Common use

■ A/D converter

10-bit × 8 channels (with S/H)

■ Special Ports

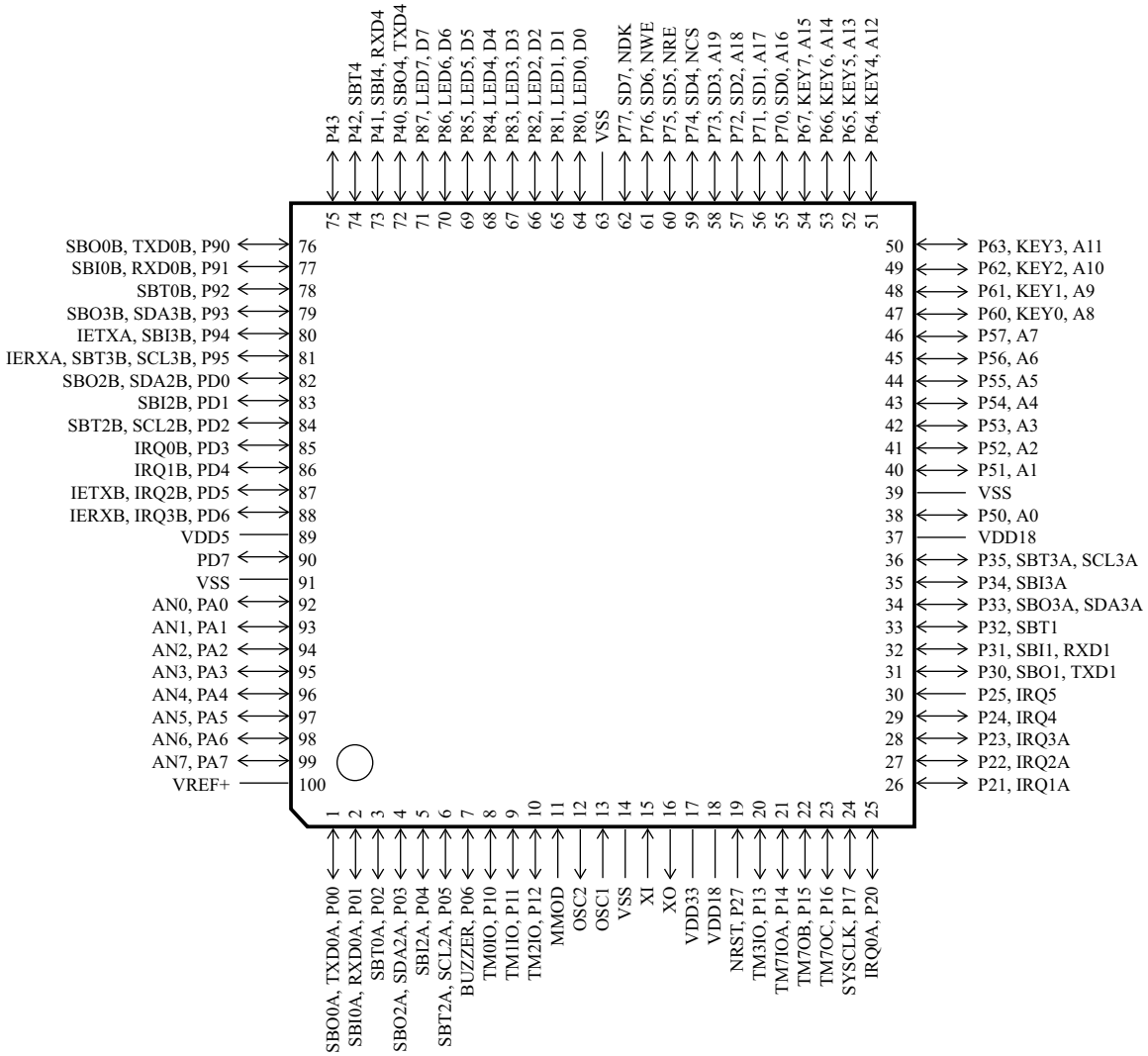
Buzzer output. High-current drive port

■ ROM Correction

Correcting address designation: Up to 7 addresses possible

■ Pin Assignment

LQFP100-P-1414



Note) Pin 1 to Pin 75: VDD33 = 2.7 V to 3.6 V
Pin 76 to Pin 100: VDD5 = VDD33 to 5.5 V

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- Any applications other than the standard applications intended.

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(5) When designing your equipment, comply with the range of absolute maximum rating and the guaranteed operating conditions (operating power supply voltage and operating environment etc.). Especially, please be careful not to exceed the range of absolute maximum rating on the transient state, such as power-on, power-off and mode-switching. Otherwise, we will not be liable for any defect which may arise later in your equipment.
Even when the products are used within the guaranteed values, take into the consideration of incidence of break down and failure mode, possible to occur to semiconductor products. Measures on the systems such as redundant design, arresting the spread of fire or preventing glitch are recommended in order to prevent physical injury, fire, social damages, for example, by using the products.

(6) Comply with the instructions for use in order to prevent breakdown and characteristics change due to external factors (ESD, EOS, thermal stress and mechanical stress) at the time of handling, mounting or at customer's process. When using products for which damp-proof packing is required, satisfy the conditions, such as shelf life and the elapsed time since first opening the packages.

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