

# □ MN102L62G

Type	MN102L62G
ROM (x8-bit / x16-bit)	128 K
RAM (x8-bit / x16-bit)	5 K
Package	LQFP100-P-1414 *Lead-free
Minimum Instruction Execution Time	100 ns (at 4.5 V to 5.5 V, 20 MHz)
Interrupts	<ul style="list-style-type: none"> <li>• RESET • Watchdog • Timer counter 0 to 5 • Timer counter 6 to 7</li> <li>• Timer counter 6 to 7 compare capture A • Timer counter 6 to 7 compare capture B</li> <li>• ATC transfer finish • External 0 to 4 • Serial ch.0, 1 transmission • Serial ch.0, 1 reception</li> <li>• NMI pin • A/D conversion finish</li> </ul>
Timer Counter	<p>Timer counter 0 : 8-bit × 1 (timer output, event count)            Clock source ..... 1/1, 1/128 of system clock frequency; 1/4 of low speed clock frequency; external clock            Interrupt source ..... underflow of timer counter 0</p> <p>Timer counter 1 : 8-bit × 1 (timer output, event count, A/D conversion start up)            Clock source ..... system clock; 1/4 of low speed clock frequency; external clock; timer counter 0 output            Interrupt source ..... underflow of timer counter 1</p> <p>Timer counter 2 to 3 : 8-bit × 1 (timer output, event count, UART baud rate generator)            Clock source ..... system clock; external clock; timer counter 0 output; timer counter 1, 2 output            Interrupt source ..... underflow of timer counter 2, 3</p> <p>Timer counter 4, 5 : 8-bit × 1 (timer output, event count)            Clock source ..... 1/4 of low speed clock frequency; external clock; timer counter 0 output; timer counter 3, 4 output            Interrupt source ..... underflow of timer counter 4, 5</p> <p>Timer counter 6, 7 : 16-bit × 1            (timer output, event count, input capture, output compare, PWM output, 2-phase encoder input)            Clock source ..... system clock; external clock; timer counter 4, 5 output            Interrupt source ..... coincidence with compare capture A or at capture; coincidence with compare capture B or at capture; underflow of timer counter 6, 7</p> <p style="text-align: center;">(Connectable) timer counter 0 to 5</p>
Serial Interface	<p>Serial 0 : 7, 8-bit × 1 (common use with UART, transfer direction of MSB/LSB selectable)            Clock source ..... 1/16 of timer counter 2 frequency; 1/16 of timer counter 3 frequency; external clock; 1/2 of timer counter 2 frequency</p> <p>Serial 1 : 7, 8-bit × 1 (common use with UART, transfer direction of MSB/LSB selectable)            Clock source ..... 1/16 of timer counter 2 frequency; 1/16 of timer counter 3 frequency; external clock; 1/2 of timer counter 3 frequency</p> <p>UART × 2 (common use with serial 0, 1)</p> <p>I<sup>2</sup>C × 2 (single master)</p>
I/O Pins	I/O   80   • Common use : 16 (by 8 bits), 8 (by 4 bits), 56 (by bit)
A/D Inputs	8-bit × 8-ch. (with S/H)
PWM	16-bit × 2-ch.
Notes	Burst ROM interface support, ATC (between serial 0ch and internal RAM) support

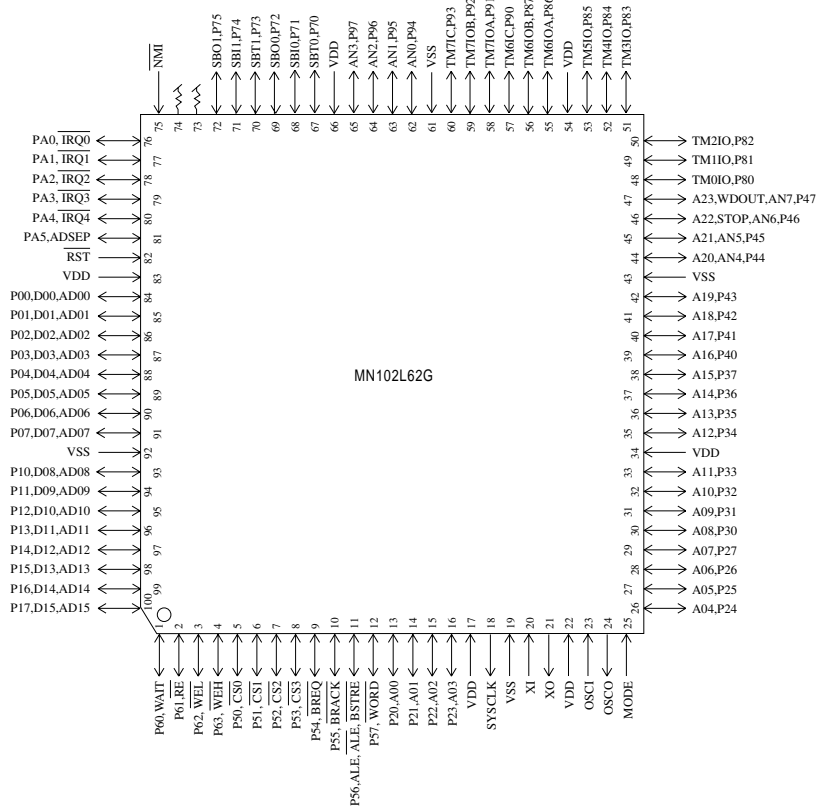
**Electric Characteristics**

**Supply current**

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating supply current	IDDopr	VI = VDD or VSS, output open f = 20 MHz, VDD = 5.0 V			75	mA
Supply current at STOP	IDDS	Pin with pull-up resistor is open all other input pins and Hi-Z state input/output			50	μA
Supply current at HALT	IDDH	pins are simultaneously applied VDD or VSS level f = 20 MHz, VDD = 5.0 V, output open			30	mA

(Ta = -40°C to +85°C, VDD = 5.0 V, VSS = 0 V)

**Pin Assignment**



LQFP100-P-1414 \*Lead-free

See the next page for support tool.

## Support Tool

<b>In-circuit Emulator</b>	PX-ICE102L00 + PX-PRB102L25-LQFP100-P-1414	
<b>EPROM Built-in Type</b>	Type	MN102LP25G
	ROM (× 8-bit / × 16-bit)	128 K
	RAM (× 8-bit / × 16-bit)	5 K
	Minimum instruction execution time	100 ns (4.5 V to 5.5 V , 20 MHz)
	Package	LQFP100-P-1414 *Lead-free
<b>Flash Memory Built-in Type</b>	Type	MN102LF25Z
	ROM (× 8-bit / × 16-bit)	128 K
	RAM (× 8-bit / × 16-bit)	3 K
	Minimum instruction execution time	100 ns (4.5 V to 5.5 V , 20 MHz)
	Package	LQFP100-P-1414 *Lead-free



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