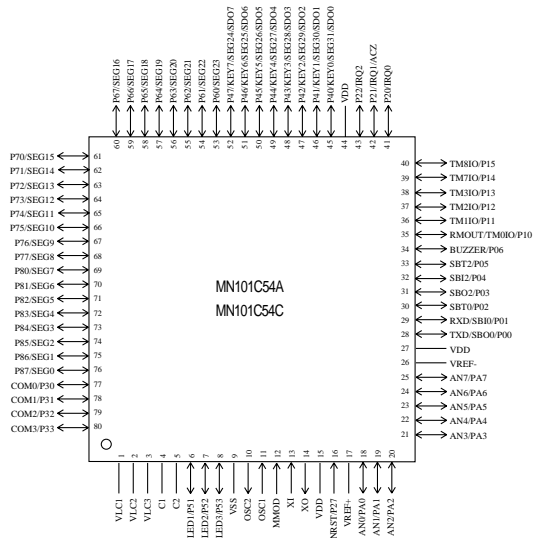


□ MN101C54A , MN101C54C

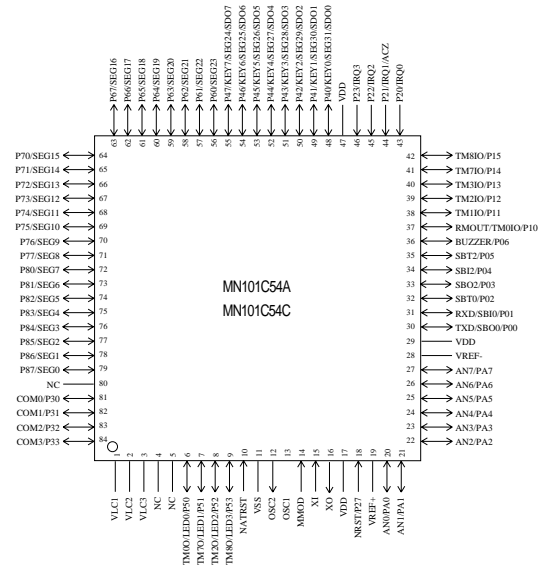
Type	MN101C54A	MN101C54C
ROM (x8-bit)	32 K	48 K
RAM (x8-bit)	2 K	2 K
Package	QFP084-P-1818E *Lead-free, LQFP080-P-1414A *Lead-free, TQFP080-P-1212D *Lead-free (under planning)	
Minimum Instruction Execution Time	0.1 μs (at 4.5 V to 5.5 V, 20 MHz) 0.25 μs (at 2.7 V to 5.5 V, 8 MHz)*1 62.5 μs (at 2.0 V to 5.5 V, 32 kHz)*1,2	
	*1 The lower limit for operation guarantee for flash memory built-in type is 4.5 V. *2 The lower limit for operation guarantee for EPROM built-in type is 2.3 V.	
Interrupts	<ul style="list-style-type: none"> • RESET • Watchdog • External 0 • External 1 • External 2 • External 3*1 • External 4 (key interrupt dedicated) • Timer 0 • Timer 1 • Timer 2 • Timer 3 • Timer 6 • Time base • Timer 7 (2 systems) • Timer 8 (2 systems) • Serial 0 (2 systems) • Serial 2 • A/D conversion finish *1 LQFP080-P-1414A, TQFP080-P-1212D: Not mounted	
Timer Counter	<p>Timer counter 0 : 8-bit × 1 (square-wave/8-bit PWM output, event count, generation of remote control carrier, simple pulse width measurement) (square-wave/PWM output to large current terminal P50 possible) Clock source 1/2, 1/4 of system clock frequency; 1/1, 1/4, 1/16, 1/32, 1/64 of OSC oscillation clock frequency; 1/1 of XI oscillation clock frequency; external clock input Interrupt source coincidence with compare register 0</p> <p>Timer counter 1 : 8-bit × 1 (square-wave output, event count, synchronous output event) Clock source 1/2, 1/8 of system clock frequency; 1/1, 1/4, 1/16, 1/8192, 1/32768 of OSC oscillation clock frequency; 1/1 of XI oscillation clock frequency; external clock input Interrupt source coincidence with compare register 1</p> <p>Timer counter 0, 1 can be cascade-connected.</p> <p>Timer counter 2 : 8-bit × 1 (square-wave output, additional pulse type 10-bit PWM output, event count, synchronous output event, simple pulse width measurement) (square-wave/PWM output to large current terminal P52 possible) Clock source 1/2, 1/4 of system clock frequency; 1/1, 1/4, 1/16, 1/32, 1/64 of OSC oscillation clock frequency; 1/1 of XI oscillation clock frequency; external clock input Interrupt source coincidence with compare register 2</p> <p>Timer counter 3 : 8-bit × 1 (square-wave output, event count, generation of remote control carrier, serial 0 baud rate timer) Clock source 1/2, 1/8 of system clock frequency; 1/1, 1/4, 1/16, 1/64, 1/128 of OSC oscillation clock frequency; 1/1 of XI oscillation clock frequency; external clock input Interrupt source coincidence with compare register 3</p> <p>Timer counter 2, 3 can be cascade-connected.</p> <p>Timer counter 6 : 8-bit freerun timer Clock source 1/1 of system clock frequency; 1/1, 1/4096, 1/8192 of OSC oscillation clock frequency; 1/1, 1/4096, 1/8192 of XI oscillation clock frequency Interrupt source coincidence with compare register 6</p> <p>Timer counter 7 : 16-bit × 1 (square-wave output, IGBT/16-bit PWM output (cycle / duty continuous variable), event count, synchronous output event, pulse width measurement, input capture) (square-wave/PWM output to large current terminal P51 possible) Clock source 1/1, 1/2, 1/4, 1/16 of system clock frequency; 1/1, 1/2, 1/4, 1/16 of OSC oscillation clock frequency; 1/1, 1/2, 1/4, 1/16 of external clock input frequency Interrupt source coincidence with compare register 7 (2 lines)</p>	

Pin Assignment



LQFP080-P-1414A *Lead-free

TQFP080-P-1212D *Lead-free (under planning)



QFP084-P-1818E *Lead-free

Support Tool

In-circuit Emulator

PX-ICE101C / D + PX-PRB101C54-TPFP080-P-1212D-M (under planning)
 PX-ICE101C / D + PX-PRB101C54-QFP084-P-1818E-M
 PX-ICE101C / D + PX-PRB101C54-LQFP080-P-1414A-M

EPROM Built-in Type

Type	MN101CP54C
ROM (× 8-bit)	48 K
RAM (× 8-bit)	2 K
Minimum instruction execution time	0.1 μs (at 4.5 V to 5.5 V, 20 MHz) 0.25 μs (at 2.7 V to 5.5 V, 8 MHz) 62.5 μs (at 2.3 V to 5.5 V, 32 kHz)
Package	LQFP080-P-1414A *Lead-free, QFP084-P-1818E *Lead-free, TQFP080-P-1212D *Lead-free (under planning)

Flash Memory Built-in Type

Type	MN101CF54D [ES (Engineering Sample) available]
ROM (× 8-bit)	64 K
RAM (× 8-bit)	2 K
Minimum instruction execution time	0.1 μs (at 4.5 V to 5.5 V, 20 MHz) 0.25 μs (at 4.5 V to 5.5 V, 8 MHz) 62.5 μs (at 4.5 V to 5.5 V, 32 kHz)
Package	LQFP080-P-1414A *Lead-free, QFP084-P-1818E *Lead-free, TQFP080-P-1212D *Lead-free (under planning)

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