

□ MN103SC2A

Type	MN103SC2A	MN103SFC2D
Internal ROM type	Mask ROM	FLASH
ROM (byte)	32K	64K
RAM (byte)	2K	4K
Package (Lead-free)	QFP044-P-1010F (Under development)	
Minimum Instruction Execution Time	16.7 ns (at 4.5 V to 5.6 V, 10 MHz) * at internal 6 times oscillation used	16.7 ns (at 4.5 V to 5.6 V, 10 MHz)

■ Interrupts

8 external interrupts
18 internal interrupts : watch dog timer, timer, serial I/F, PWM, A/D, system error

■ Timer Counter

8-bit timer × 4

Timer 0 to 3 Interval timer, Event counter, cascading connectable

16-bit timer × 2

Timer 4 Interval timer, Event counter, PWM output(6 pins simultaneous output are available), Double buffer
Timer 5 Interval timer, Double buffer, Start synchronized with 3-phase PWM are available

Watch dog timer

■ Serial interface

UART (full duplex) / synchronous interface selective × 1

Serial 0 1-bit to 8-bit transmission (synchronous), 2 and 3 channel type selectable (synchronous)

■ I/O Pins

I/O	29	Common us : 29
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■ A/D converter

10-bit x 2unit, total 8 channels

Simultaneous conversion of 2 series are available, With S/H

Conversion start synchronized with 3-phase PWM or timer 5 are available

■ Motor Control PWM

16-bit 3-phase PWM × 1

Minimum resolution 16.7 ns

Triangular waveform or jigsaw waveform, dead time setup, Double buffer, Output polar switching is available, PWM output pin protect function

■ Electrical Characteristics (A/D converter characteristics)

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Non-linear error		10-bit			±3	LSB
A/D conversion time	tAD			1.0		μs
Analog input voltage	VIA		VSS		VDD	V

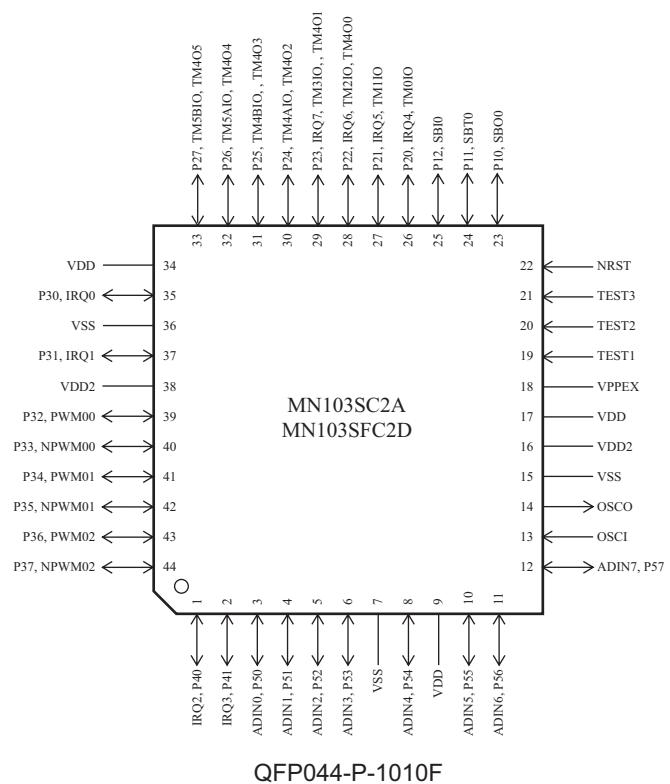
(Ta = 25°C, VDD = 5.0 V, VSS = 0 V)

■ Development tools

In-circuit Emulator

PX-ICE-103SC2 (Under development)

■ Pin Assignment



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