

MN103SC2 Series

Type	MN103SC2A	MN103SC2D	MN103SFC2D
Internal ROM type	Mask ROM		FLASH
ROM (byte)	32K	64K	
RAM (byte)	4K		
Package (Lead-free)	QFP044-P-1010F		
Minimum Instruction Execution Time	16.7 ns (4.5 V to 5.5 V)		

■ Interrupts

8 external interrupts

20 internal interrupts: Watchdog timer, Timer, Serial I/F, PWM, A/D conversion finish, System error

■ Timer Counter

8-bit timer × 4

Timer 0 to 3Interval timer, Event count, Cascading connectable

16-bit timer × 2

Timer 4Interval timer, Event count, PWM output (6 pins simultaneous output are available), Double buffer

Timer 5Interval timer, Double buffer, Start synchronized with 3-phase PWM are available

Watchdog timer × 1

■ Serial interface

UART (full duplex) /Synchronous interfaces 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 use × 29

■ A/D converter

10-bit × 2 unit, 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

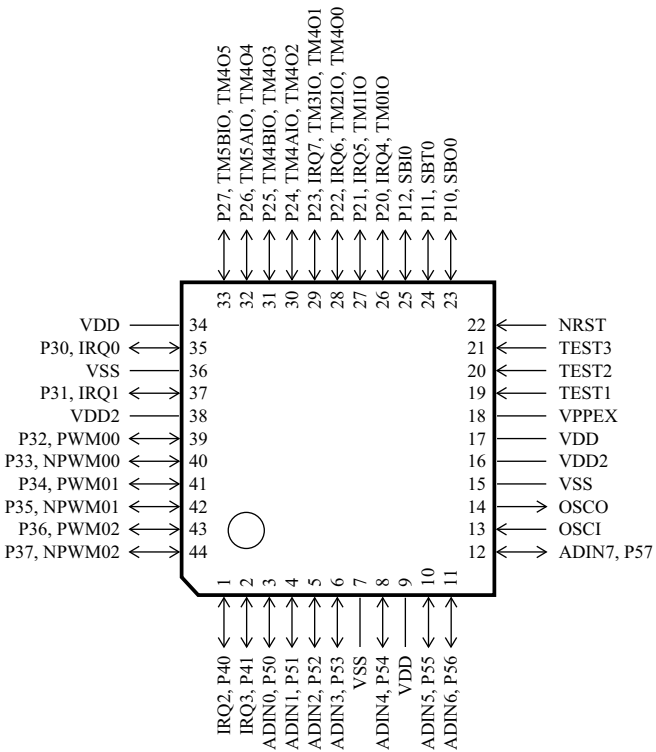
Triangular waveform or jigsaw waveform, Dead time setup, Double buffer, Output polar switching is available, PWM output pin protect function

■ 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

■ Pin Assignment
QFP044-P-1010F



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