

□ 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

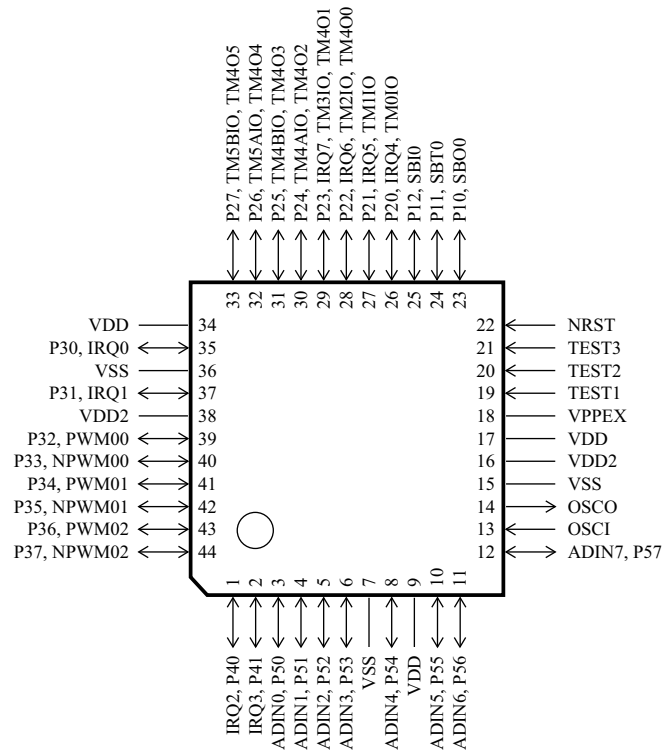
16-bit 3-phase PWM × 1
 Minimum resolution: 16.7 ns
 Triangular waveform or jigsaw waveform. Dead time setup. Double buffer. Output polar switching is available. PWM output pin protect function

■ 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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