

□ MN103SA5K

Type	MN103SA5K	MN103SFA5K
Internal ROM type	Mask ROM	FLASH
ROM (byte)	256K	
RAM (byte)	8K	
Package (Lead-free)	QFP100-P-1818B	
Minimum Instruction Execution Time	16.7 ns (at 4.5 V to 5.5 V) * at internal 4 times oscillation used	16.7 ns (at 4.5 V to 5.5 V)

■ Interrupts

- 9 external interrupts
- 45 internal interrupts : watch dog timer, timer, serial I/F, PWM, A/D, system error

■ Timer Counter

- 8-bit timer × 12
Interval timer, Event counter, Cascading connectable
- 16-bit timer × 6
Interval timer, Event counter, PWM output, Double buffer
- Watch dog timer

■ Serial interface

- UART (full duplex) / synchronous interfaces selective × 3

■ I/O Pins

I/O	81	Common use × 81
-----	----	-----------------

■ A/D converter

- 10-bit × 3 unit, 20 inputs
- Minimum conversion time 1.0 μs

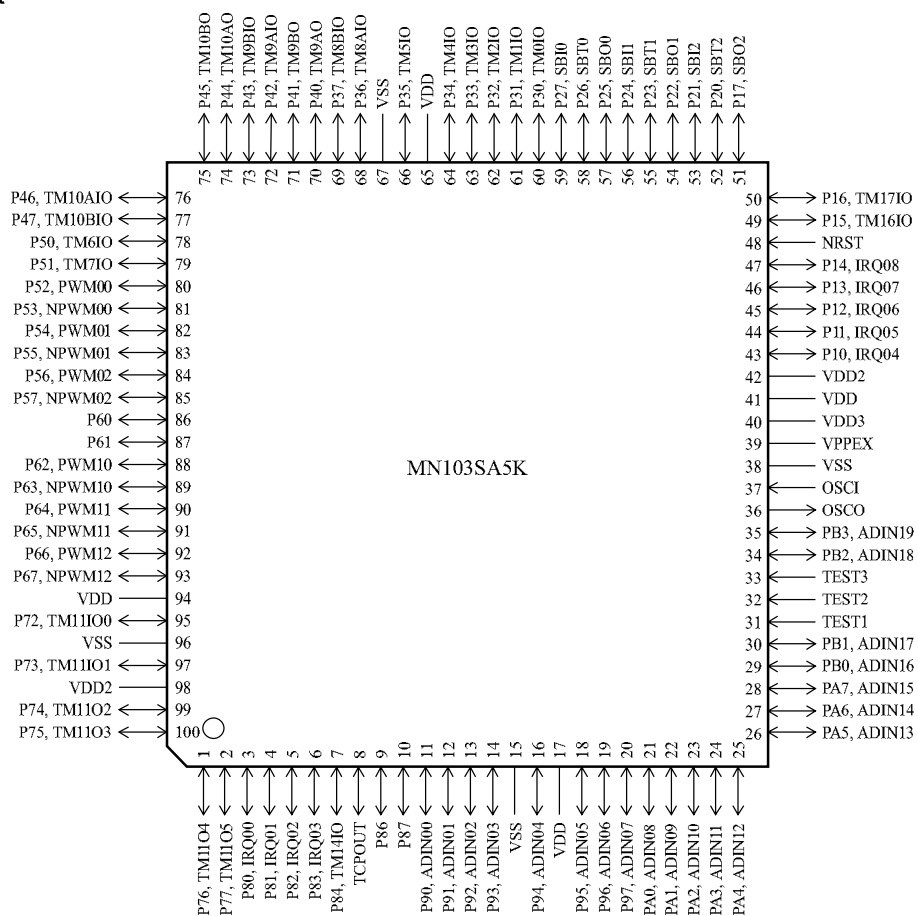
■ PWM

- 3-phase PWM outputs × 2
- 16-bit counter, triangular wave, saw-tooth wave, dead time setup, double buffer

■ Development tools

- In-circuit Emulator
PX-ICE-103SA5

■ Pin Assignment



QFP100-P-1818B