

# □ MN102H75K

Type	MN102H75K	MN102HF75K
Internal ROM type	Mask ROM	FLASH
ROM (byte)	256K	
RAM (byte)	8K	
Package (Lead-free)	QFP084-P-1818E	
Minimum Instruction Execution Time	83 ns (at 3.0 V to 3.6 V, 12 MHz)	

## ■ Interrupts

External (6 lines)

Internal (30 lines) : Timer × 11, A/D × 1, Undefined command × 1, RESET × 1, OSD × 2, Serial × 4, I<sup>2</sup>C × 1, Caption × 4, Remote control × 1, Address coincidence × 4

## ■ Timer Counter

8-bit timer × 4

16-bit timer × 2

Watchdog timer : 17-bit × 1

## ■ Serial interface

I<sup>2</sup>C × 1 : for multimaster mode, bus line (output) has 2 systems

Sync serial / I<sup>2</sup>C (master) / UART × 2

## ■ Caption / Teletext Decoder

Built-in sync separator × 2

## ■ I/O Pins

I/O	66	Common use
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## ■ A/D converter

8-bit × 12-ch. (with S/H)

## ■ D/A converter

4-bit × 4-ch. (analog R, G, B, YM output)

## ■ PWM

8-bit × 7-ch.

## ■ Special Ports

Remote control reception

## ■ CRTC

3-layer display (graphics, characters, splits)

## ■ Notes

Remote control input discriminant circuit built-in

■ Electrical Characteristics (D/A converter characteristics)

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
D/A full-scale output current	IFS	RL = 200 Ω, VREF = 1.2 V, RIREF = 1.2 kΩ	4.5	5.0	5.5	mA
D/A output voltage setting range	VO		0.9		1.1	V
D/A non-linear error	NLE				±0.5	LSB
D/A differential non-linear error	DNLE				±0.5	LSB
D/A channel interval error	IFS	VREF = 1.2 V, RIREF = 1.2 kΩ, Error from 4-channel average IFS			±5	%

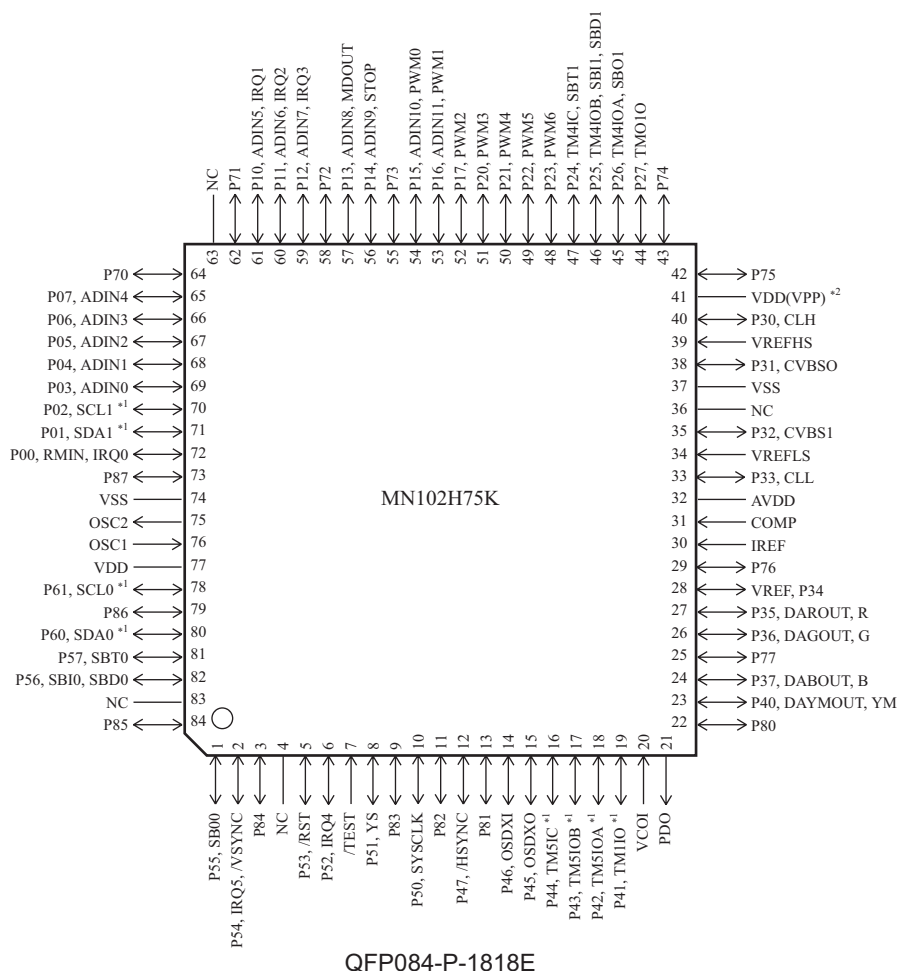
(Ta = 25°C, VDD = AVDD = 3.3 V, VSS = 0 V, fosc = 4 MHz)

■ Development tools

In-circuit Emulator

PX-ICE102H75-QFP084-P-1818E

■ Pin Assignment



Note) \*1: 5 V dielectric N-ch. open drain output pin  
 \*2: MN102H75K (VDD), MN102HF75K (VPP)

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