☐ MN102H85K

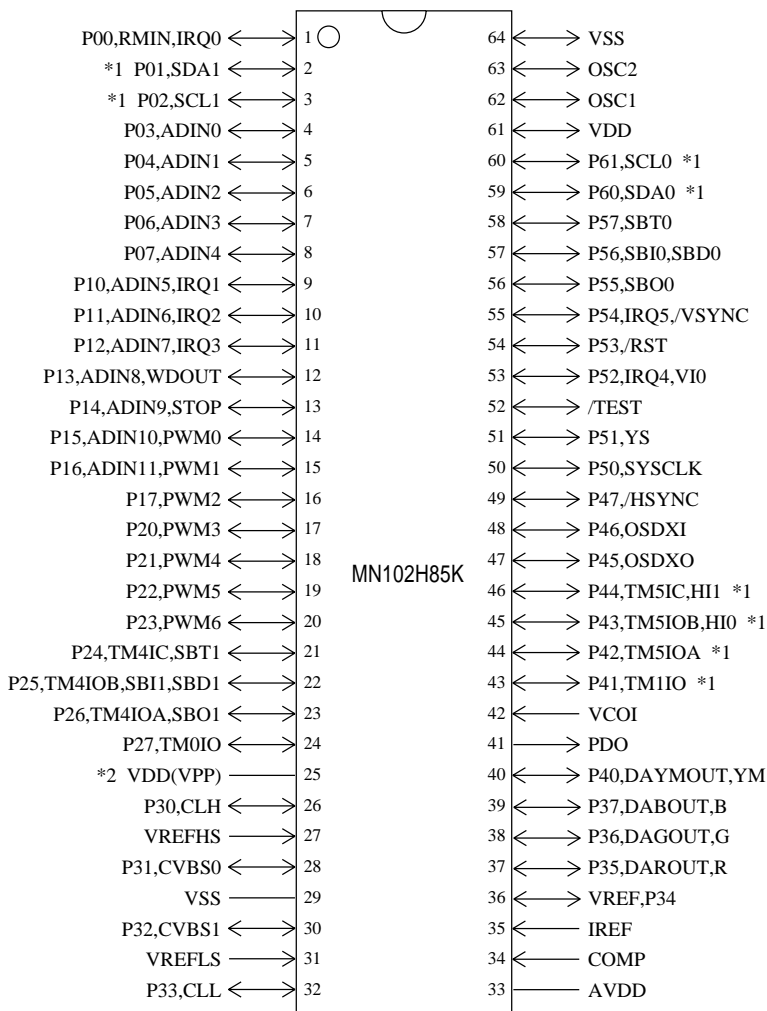| Type	MN102H85K
ROM (×16-bit)	256 K
RAM (×16-bit)	8 K
Package (Conventional Package)	SDIP064-P-0750C *Lead-free (SDIP064-P-0750)
Minimum Instruction Execution Time	83 ns (at 3.0 V to 3.6 V, 12 MHz)
Interrupts	External (6 lines) Internal (30 lines) : Timer × 11, A/D × 1, Undefined command × 1, RESET × 1, OSD × 2, Serial × 4, I²C × 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	I²C × 1: for multimaster mode, bus line (output) has 2 systems Sync serial / I²C (master) / UART × 2
Caption	• Built-in sync separator × 2
I/O Pins	I/O	50	• Common use
A/D Inputs	8-bit × 12-ch. (with S/H)
D/A Outputs	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 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	RL = 200 Ω, VREF = 1.2 V, RIREF = 1.2 kΩ	0.9		1.1	V
D/A non-linear error	NLE	RL = 200 Ω, VREF = 1.2 V, RIREF = 1.2 kΩ			± 0.5	LSB
D/A differential non-linear error	DNLE	RL = 200 Ω, VREF = 1.2 V, RIREF = 1.2 kΩ			± 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)

Panasonic

Pin Assignment

( ) : Conventional Package

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P00,RMIN,IRQ0   ←→  1 ◯        64  ←→  VSS
*1  P01,SDA1    ←→  2          63  ←→  OSC2
*1  P02,SCL1    ←→  3          62  ←→  OSC1
    P03,ADIN0   ←→  4          61  ←→  VDD
    P04,ADIN1   ←→  5          60  ←→  P61,SCL0  *1
    P05,ADIN2   ←→  6          59  ←→  P60,SDA0  *1
    P06,ADIN3   ←→  7          58  ←→  P57,SBT0
    P07,ADIN4   ←→  8          57  ←→  P56,SBI0,SBD0
P10,ADIN5,IRQ1  ←→  9          56  ←→  P55,SBO0
P11,ADIN6,IRQ2  ←→ 10          55  ←→  P54,IRQ5,/VSYNC
P12,ADIN7,IRQ3  ←→ 11          54  ←→  P53,/RST
P13,ADIN8,WDOUT ←→ 12          53  ←→  P52,IRQ4,VI0
P14,ADIN9,STOP  ←→ 13          52  ←→  /TEST
P15,ADIN10,PWM0 ←→ 14          51  ←→  P51,YS
P16,ADIN11,PWM1 ←→ 15          50  ←→  P50,SYSCLK
    P17,PWM2    ←→ 16          49  ←→  P47,/HSYNC
    P20,PWM3    ←→ 17          48  ←→  P46,OSDXI
    P21,PWM4    ←→ 18  MN102H85K 47 ←→  P45,OSDXO
    P22,PWM5    ←→ 19          46  ←→  P44,TM5IC,HI1  *1
    P23,PWM6    ←→ 20          45  ←→  P43,TM5IOB,HI0  *1
P24,TM4IC,SBT1  ←→ 21          44  ←→  P42,TM5IOA  *1
P25,TM4IOB,SBI1,SBD1 ←→ 22     43  ←→  P41,TM1IO  *1
P26,TM4IOA,SBO1 ←→ 23          42  ←   VCOI
    P27,TM0IO   ←→ 24          41  →   PDO
*2  VDD(VPP)    ── 25          40  ←→  P40,DAYMOUT,YM
    P30,CLH     ←→ 26          39  ←→  P37,DABOUT,B
    VREFHS      →  27          38  ←→  P36,DAGOUT,G
    P31,CVBS0   ←→ 28          37  ←→  P35,DAROUT,R
    VSS         ── 29          36  ←→  VREF,P34
    P32,CVBS1   ←→ 30          35  ←   IREF
    VREFLS      →  31          34  ←   COMP
    P33,CLL     ←→ 32          33  ──  AVDD
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SDIP064-P-0750C *Lead-free
(SDIP064-P-0750)

*1: 5 V dielectric Nch open drain output pin

*2 : MN102H85K (VDD), MN102HF85K (VPP)

Support Tool

In-circuit Emulator	PX-ICE102H85-SDIP064-P-0750	
Flash Memory Built-in Type	Type	MN102HF85K
	ROM (× 16-bit)	256 K
	RAM (× 16-bit)	8 K
	Minimum instruction execution time	83 ns (at 3.0 V to 3.6 V, 12 MHz)
	Package	SDIP064-P-0750C *Lead-free
	(Conventional Package)	(SDIP064-P-0750)

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