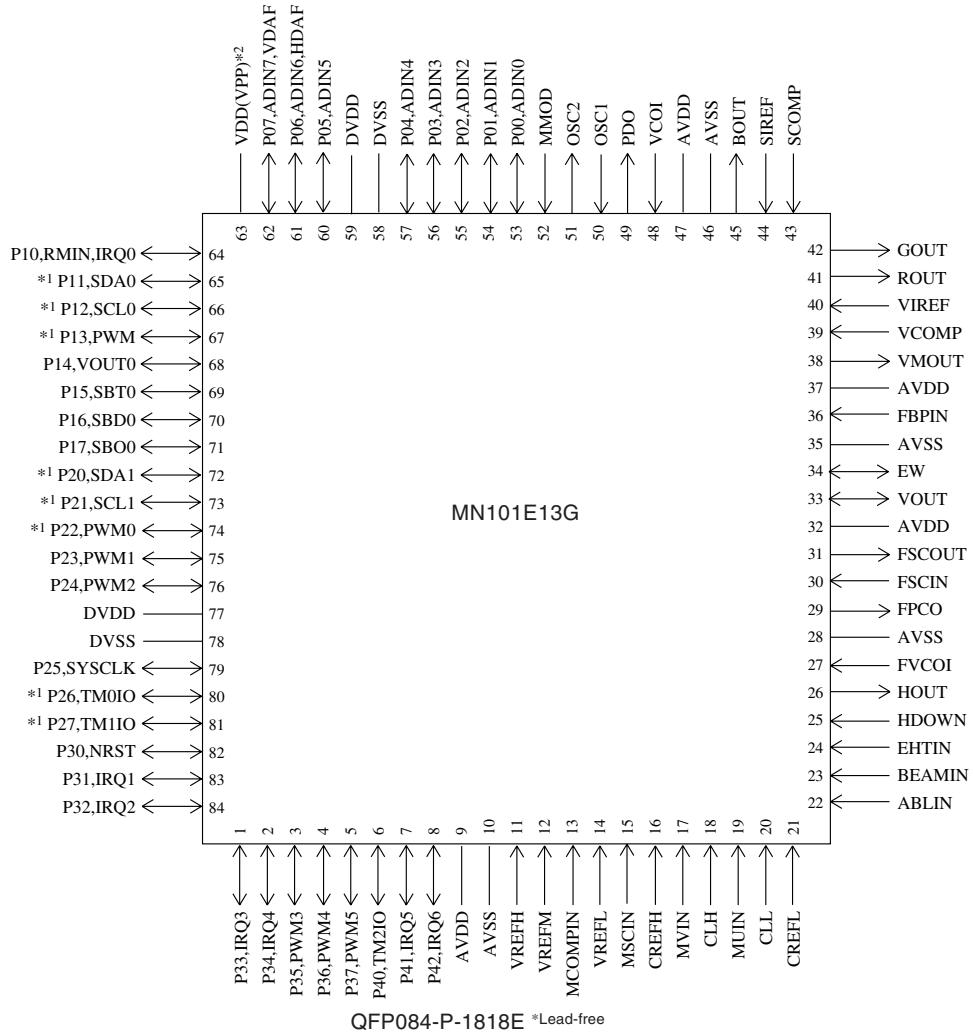


# □ MN101E13G

|   |   |    |              |
|---|---|----|--------------|
| <b>Type</b>                               | MN101E13G   |    |              |
| <b>ROM (x16-bit)</b>                      | 128 K   |    |              |
| <b>RAM (x16-bit)</b>                      | 4 K   |    |              |
| <b>Package</b>                            | QFP084-P-1818E *Lead-free   |    |              |
| <b>Minimum Instruction Execution Time</b> | 100 ns (at 3.135 V to 3.465 V, normal-mode)   |    |              |
| <b>Interrupts</b>                         | External (7 lines)<br>Internal (13 lines) : Timer × 4, A/D × 1, RESET × 1, OSD × 1, Serial × 2, I <sup>2</sup> C × 1, Caption × 1, Remote control × 1, HSYNC× 1, VSYNC× 1 |    |              |
| <b>Timer Counter</b>                      | 8-bit timer × 4<br>Watchdog timer: Time-out period is selectable.   |    |              |
| <b>Serial Interface</b>                   | I <sup>2</sup> C × 1: for multimaster mode, bus line (output) has 2 systems<br>Sync serial / UART × 1   |    |              |
| <b>Caption/Teletext Decoder</b>           | • Built-in sync separator × 1   |    |              |
| <b>I/O Pins</b>                           | <b>I/O</b>  | 35 | • Common use |
| <b>A/D Inputs</b>                         | 10-bit × 8-ch. (with S/H)   |    |              |
| <b>PWM</b>                                | 8-bit × 6-ch. , 14-bit × 1-ch.  |    |              |
| <b>Special Ports</b>                      | Remote control reception  |    |              |
| <b>CRTC</b>                               | 1-layer display (graphics, characters, splits)  |    |              |
| <b>Notes</b>                              | Remote control input discriminant circuit built-in,<br>build-in NTSC video signal processing circuit, built-in 3-line comb filter   |    |              |

## Pin Assignment



## Support Tool

|                            |                                    |  |
|----------------------------|------------------------------------|--|
| In-circuit Emulator        | PX-PAC101E02-4W9J                  |  |
| Flash Memory Built-in Type | Type                               | MN101EF13G [ES (Engineering Sample) available] |
|                            | ROM (x 8-bit)                      | 128 K  |
|                            | RAM (x 8-bit)                      | 4 K  |
|                            | Minimum instruction execution time | 100 ns   |
|                            | Package                            | QFP084-P-1818E *Lead-free                      |

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