

November 6, 2012

Product Specifications of the RL78/L13 Group of MCUs

| Item | | Specifications |
|-----------------------|------------------------------------|--|
| Group name | | RL78/L13 |
| Pin-count | | 64-pin 80-pin |
| Code flash (Byte) | | 16K, 32K, 48K, 64K, 96K, 128K |
| Data flash (Byte) | | 4K |
| RAM (Byte) | | 1K, 1.5K, 2K, 4K, 6K, 8K |
| Clock | Main system clock | External main system clock input: 1 to 20 MHz High speed on-chip oscillator clock: 24/16/12/8/4/1 MHz |
| | Sub system clock | XT1 (crystal) oscillation, external subsystem clock 32.768 kHz (TYP.): VDD = 1.6 to 5.5 V |
| | Low-speed on-chip oscillator clock | Internal oscillation 15 kHz (TYP.) |
| CPU | | RL78 CPU core (16-bit CISC CPU) 30 DMIPS (24 MHz operation) |
| I/O | | 49 65 |
| Timer | | 16-bit timer: 8 ch 16-bit highly efficient timer (KB20): 1 ch 12-bit interval timer: 1 ch |
| 8/10-bit A/D | | 9 ch 12 ch |
| Serial I/F | | I ² C: 1 ch CSI: 1 ch / simplified I ² C: 1 ch / UART: 1 ch CSI: 1 ch / simplified I ² C: 1 ch / UART (LIN-bus supported): 1 ch |
| | | UART: 1 ch UART: 2 ch |
| LCD controller/driver | | Selectable LCD drive power supply (internal voltage boosting method / capacitor split method / external resistance division method) |

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|-------------------------------|-----------------------|---|-----------------------|
| | Segment signal output | 36 (32) ^{*1} | 51 (47) ^{*1} |
| | Common signal output | 4 (8) ^{*1} | |
| External interrupt sources | | 5 | 8 |
| DMA | | 4 ch | |
| Other features | | Multiplier and divider/multiply-accumulator, Clock output / buzzer output, Watchdog timer (WDT), real-time clock (RTC), Low voltage detection (LVD), power-on reset (POR), Safety functions, on-chip debug function | |
| Power supply voltage | | 1.6 to 5.5 V | |
| Operating ambient temperature | | Ta: -40 to +85°C | |

*1: The number inside the parentheses “()” is the number of segment signal output in the case of 8COM operation.