Microprocessor Reset IC

Features

- **Power-On Reset Generator With Fixed Delay Time of 200ms**
- **Manual Reset Input (G660/G661)**
- **Available in three RESET Output Options**
  Push-Pull $\overline{\text{RESET}}$ Output (G660L/G662)
  Push-Pull RESET Output (G660H/G662)
  Open-Drain $\overline{\text{RESET}}$ Output (G661L)
- **Supply Voltage Supervision Range 2.5V, 3V, 3.3V, 5V**
- **Watchdog Timer (G660/G661/G662)**
- **Supply Current of 10µA at V_{CC}=3.3V**
- **SOT-23-5 Package**
- **Temperature Range . . . −40°C to 85°C**

Applications

- **Critical µP and µC Power Monitoring**
- **Industrial Equipment**
- **Programmable Controls**
- **Automotive Systems**
- **Portable/Battery-Powered Equipment**
- **Intelligent Instruments**
- **Wireless Communications Systems**
- **Notebook/Desktop Computers**

General Description

The G660/G661/G662 provide circuits initialization and timing supervision, primarily for DSP and processor-based systems. During power-on, $\overline{\text{RESET}}$ (RESET) is asserted when supply voltage VCC becomes higher than 1.1 V. Thereafter, the supply voltage supervisor monitors VCC and keeps $\overline{\text{RESET}}$ (RESET) active as long as VCC remains below the threshold voltage V_{IT+}[1].

An internal timer delays the return of the output to the inactive state to ensure proper system reset. The delay time, td, starts after VCC has risen above the threshold voltage V_{IT+}. When the supply voltage drops below the threshold voltage V_{IT-}[2], the outputs becomes active again. No external components are required. All the devices have a fixed-sense threshold voltage V_{IT-} set by an internal voltage divider.
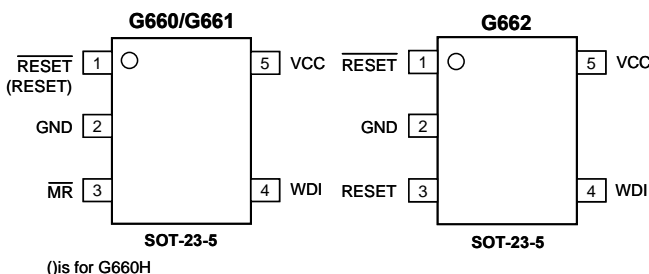
The G660/G661 incorporate a manual reset input, $\overline{\text{MR}}$. A low level at $\overline{\text{MR}}$ causes $\overline{\text{RESET}}$ (RESET) to become active. The G660/G661/G662 have WDI pin. The watchdog timer is periodically triggered by a positive or negative transition at WDI. When the supervising system fails to retrigger the watchdog circuit within the time-out interval, t_{tout}, $\overline{\text{RESET}}$ (RESET) becomes active for the time period td. This event also reinitializes the watchdog timer. Leaving WDI unconnected disables the watchdog.

The product spectrum is designed for supply voltages of 2.5V, 3V, 3.3V, and 5V. The circuits are available in a SOT-23-5 package.
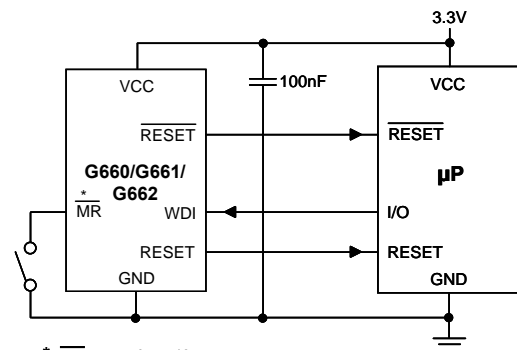
Note:
(1) V_{IT+} means the reset voltage of V_{CC} from low to high
(2) V_{IT-} means the reset voltage of V_{CC} from high to low.

Pin Configuration

()is for G660H

Typical Application Circuit

* $\overline{\text{MR}}$ is for G660/G661
** RESET is for G662

ICC may increased at high T_A, Therefore, can not connect Resistors to VCC to prevent Icc abnormal behavior at high T_A.