Micro-Power Voltage Detectors

General Description

The RT9819 is a micro-power voltage detector supervising the power supply voltage level for microprocessors (µP) or digital systems. It provides internally fixed threshold levels with 0.1V per step ranging from 1.2V to 5V, which covers most digital applications. It features low supply current of 3µA. The RT9819 performs supervisory function by sending out a reset signal whenever the V_{DD} voltage falls below a preset threshold level. This reset signal will last the whole period before V_{DD} recovering. Once V_{DD} recovered upcrossing the threshold level, the reset signal will be released after a certain delay time. RT9819 is provided in SC-70-3, SC-82 and SOT-23-3 packages.

Ordering Information

RT9819□-□□□□

- Package Type
  - U3 : SC-70-3
  - V : SOT-23-3
  - VL : SOT-23-3 (L-Type)
  - Y : SC-82
  - YR : SC-82 (R-Type)
- Lead Plating System
  - P : Pb Free
  - G : Green (Halogen Free and Pb Free)
- Threshold Voltage
  - 12 : 1.2V
  - 13 : 1.3V
  - :
  - 49 : 4.9V
  - 50 : 5.0V
- Reset Active Timeout Period
  - A = 0ms ($\overline{\text{RESET}}$)
  - B = 55ms ($\overline{\text{RESET}}$)
  - C = 220ms ($\overline{\text{RESET}}$)
  - D = 450ms ($\overline{\text{RESET}}$)
  - E = 0ms (RESET)
  - F = 55ms (RESET)
  - G = 220ms (RESET)
  - H = 450ms (RESET)

Note :

Richtek products are :

- RoHS compliant and compatible with the current requirements of IPC/JEDEC J-STD-020.
- Suitable for use in SnPb or Pb-free soldering processes.

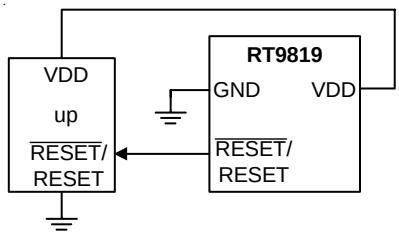
Features

- **Internally Fixed Threshold 1.2V to 5V in 0.1V Step**
- **High Accuracy ±1.5%**
- **Low Supply Current 3µA**
- **No External Components Required**
- **Quick Reset within 20µs**
- **Built-in Recovery Delay Include 0ms, 55ms, 220ms, 450ms Options**
- **Low Functional Supply Voltage 0.9V**
- **CMOS Push-Pull Output**
- **Small SC-70-3, SC-82 and SOT-23-3 Packages**
- **RoHS Compliant and 100% Lead (Pb)-Free**

Applications

- Computers
- Controllers
- Intelligent Instruments
- Critical µP and µC Power Monitoring
- Portable/Battery-Powered Equipment

Typical Application Circuit

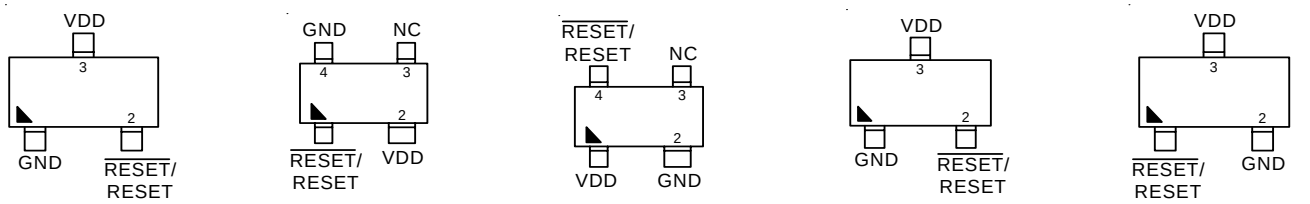


Marking Information

For marking information, contact our sales representative directly or through a Richtek distributor located in your area.

Pin Configurations

(TOP VIEW)



SC-70-3 SC-82 SC-82 (R-Type) SOT-23-3 SOT-23-3 (L-Type)

Functional Pin Description

Pin Name	Pin Function
GND	Ground
$\overline{\text{RESET}}$	Active Low Push-Pull Reset Output
RESET	Active High Push-Pull Reset Output
VDD	Power Pin

Function Block Diagram

