MCP111/112

Micropower Voltage Detector

Features

- Ultra-low supply current: 1.75 µA (max.)
- Precision monitoring options of:
  - 1.90V, 2.32V, 2.63V, 2.90V, 2.93V, 3.08V, 4.38V and 4.63V
- Resets microcontroller in a power-loss event
- Active-low V_{OUT} pin:
  - **MCP111** active-low, open-drain
  - **MCP112** active-low, push-pull
- Available in SOT23-3, TO-92, SC-70 and SOT-89-3 packages
- Temperature Range:
  - Extended: -40°C to +125°C (**except MCP1XX-195**)
  - Industrial: -40°C to +85°C (**MCP1XX-195 only**)
- Pb-free devices

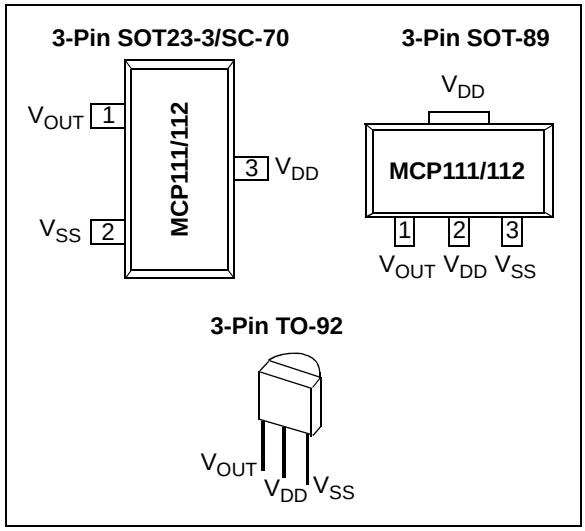
Applications

- Critical Microcontroller and Microprocessor Power-Monitoring Applications
- Computers
- Intelligent Instruments
- Portable Battery-Powered Equipment

Description

The MCP111/112 are voltage-detecting devices designed to keep a microcontroller in reset until the system voltage has stabilized at the appropriate level for reliable system operation. These devices also operate as protection from brown-out conditions when the system supply voltage drops below the specified threshold voltage level. Eight different trip voltages are available.

Package Types



Block Diagram

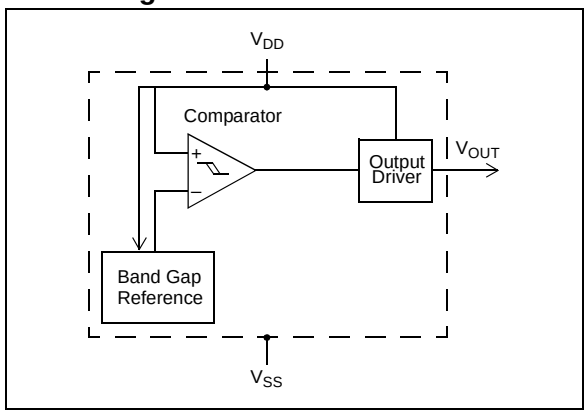


TABLE 1: DEVICE FEATURES

Device	Output		Reset Delay (typ)	Package Pin Out (Pin # 1, 2, 3)	Comment
	Type	Pull-up Resistor			
MCP111	Open-drain	External	No	V_{OUT}, V_{SS}, V_{DD}	
MCP112	Push-pull	No	No	V_{OUT}, V_{SS}, V_{DD}	
MCP102	Push-pull	No	120 ms	$\overline{RST}$, V_{DD}, V_{SS}	See **MCP102/103/121/131** Data Sheet (DS21906)
MCP103	Push-pull	No	120 ms	Vss, $\overline{RST}$, V_{DD}	See **MCP102/103/121/131** Data Sheet (DS21906)
MCP121	Open-drain	External	120 ms	$\overline{RST}$, V_{DD}, V_{SS}	See **MCP102/103/121/131** Data Sheet (DS21906)
MCP131	Open-Drain	Internal (~95 kΩ)	120 ms	$\overline{RST}$, V_{DD}, V_{SS}	See **MCP102/103/121/131** Data Sheet (DS21906)