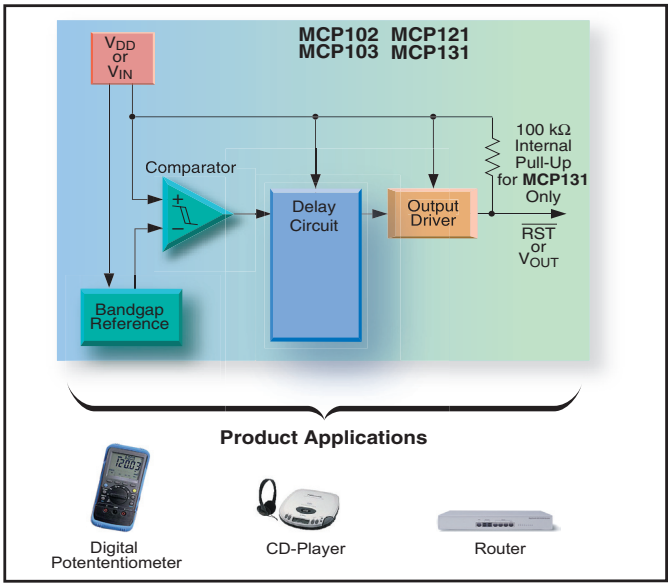
MCP102/103/121/131 - Microcontroller Supervisor Product Family

Product Summary:

Microchip's extensive family of low-cost, precision system supervisors allow the implementation of system reset circuits that protect the system from improper operation when the system voltage drops below a predetermined voltage level. The **MCP102/103/121/131** family expands the choices available to the system designer by offering a wide range of output types, reset trip points and package options. These devices are functionally equivalent and pin-compatible with many industry standard supervisory products, offering easy migration to a lower power solution.

Systems may need to take into account noisy environments and unreliable power sources, as well as the voltage decay of the system's battery. These issues may create a variety of system-level problems and can be eliminated by the use of a voltage supervisor device. Voltage supervisor devices are designed to output a signal that can be used as a system reset signal. Therefore, when the system voltage is below the operating range, the system is in reset. Once the voltage returns to the valid operating range, the voltage supervisor does not force a system reset. This allows the system supervisor to provide protection from system brown-outs, noisy power systems and decaying power supplies (such as battery applications and power loss).



Features:

- Multiple Trip Voltage Points Range from 1.9 - 4.75V
- Industrial Temperature Range: –40°C to +125°C
- Reset Type: Active-Low
- Output:
  - **MCP102/3**: Push-Pull
  - **MCP121**: Open-Drain
  - **MCP131**: Open-Drain with Internal 95 kΩ Pull-Up
- Typical Supply Current: >1 µA
- Industry-Standard Packaging:
  - SC-70-3, SOT-23-3, TO-92-3

Additional Information:

- *MCP102/103/121/131 Data Sheet*, Order No. DS21906
- Microchip's *Technical Library CD-ROM*, Order No. DS00161
- *Product Selector Guide*, Order No. DS00148
- *Analog & Interface Families Data Book 2002*, Order No. DS00207
- *Product Line Card, Order No. DS00890*
- *Voltage Supervisor Evaluation Board User's Guide*, Order No. DS51510

MICROCHIP
Power Management

CPU/System Supervisor Product Specifications

Product	V_{CC} Range (V)	Reset Voltage	Reset Type	Output	Reset Pulse Width (ms)	Typical Supply Current (µA)	Features	Package
MCP102	1V to 5.5	1.9, 2.32, 2.63, 2.93, 3.08, 4.38, 4.63	Active-Low	Push-Pull	120	1	—	SC70-3, SOT23-3, TO92-3
MCP103	1 to 5.5	1.9, 2.32, 2.63, 2.93, 3.08, 4.38, 4.64	Active-Low	Open-Drain	120	1	—	SC70-3, SOT23-3, TO92-3
MCP121	1 to 5.5	1.9, 2.32, 2.63, 2.93, 3.08, 4.38, 4.65	Active-Low	Open-Drain	120	1	—	SC70-3, SOT23-3, TO92-3
MCP131	1 to 5.5	1.9, 2.32, 2.63, 2.93, 3.08, 4.38, 4.66	Active-Low	Open-Drain	120	1	100k internal pull-up	SC70-3, SOT23-3, TO92-3
TCM809	1.2 to 5.5	4.63, 4.38, 4.00, 3.08, 2.93, 2.63, 2.32	Active-Low	Push-Pull	240	12	—	SC70-3, SOT23-3
TCM810	1.2 to 5.5	4.63, 4.38, 4.00, 3.08, 2.93, 2.63, 2.32	Active-Low	Push-Pull	240	12	—	SC70-3, SOT23-3
TCM811	1.0 to 5.5	4.63, 4.38, 4.00, 3.08, 2.93, 2.63, 1.75	Active-Low	Push-Pull	280	6	Manual Reset	SOT143-4
MCP100	1.0 to 5.5	4.72, 4.62, 4.47, 4.37, 3.075, 2.92, 2.62	Active-Low	Push-Pull	350	45	—	SOT23-3, TO92-3
MCP101	1.0 to 5.5	4.72, 4.62, 4.47, 4.37, 3.075, 2.92, 2.62	Active-High	Push-Pull	350	45	—	SOT23-3, TO92-3
TC1232	4.5 to 5.5	4.62, 4.37	Active-Low/ Active-High	Open-Drain	610	50	Watchdog Timer, Manual Reset	PDIP-8, SO-8, SO-16
TC32	4.5 to 5.5	4.5	Active-Low	Open-Drain	700	50	Watchdog Timer	TO92-3, SOT223-3
TCM812	1.1 to 5.5	4.63, 4.38, 4.00, 3.08, 2.93, 2.63, 1.75	Active-High	Push-Pull	280	6	Manual Reset	SOT143-4

Development Tools for Analog and Interface Products from Microchip

Voltage Supervisor Evaluation Board	Easy-to-use evaluation board to accomodate most 3-pin SOT23 devices.
MCP1650 Evaluation Board	Demonstrates the use of the MCP1650/51/52/53 Boost Controllers.
FilterLab® Software	Active Filter Software Design Tool
MCP2120/2150 Developer's Kit	Infrared Products Developer's Kit
MCP2510 CAN Developer's Kit	MCP2510 CAN Evaluation/Development Tool
MCP7382X EV	Evaluation Kit for MCP7382X Li-Ion Battery Charger IC Family
MCP250XX CAN I/O Expanders Developer's Kit	MCP250XX CAN Evaluation/Development Tool
MXDEV® 1 Analog Evaluation System:	Evaluation Kit for MCP Devices
MCP3201/02 Evaluation Daughter Kit	Analog-to-Digital Converter - Four Channel*
MCP3204/08 Evaluation Daughter Kit	Analog-to-Digital Converter - Four Channel*
MCP41XXX/MCP42XXX Evaluation Daughter Kit	Digital Potentiometers Evaluation and Demonstration*
TC74 Demo Board	Demo Board for TC74 Digital Thermal Sensor
TC642 Demo Board	Fan Control Module for TC64X Devices
TC642 Evaluation Kit	Evaluation Kit for TC64X Fan Controllers
TC650 Demo Board	Demo Board for TC650/TC651 Fan Control ICs
TC652 Demo Board	Demo Board for TC652/TC653 Fan Control ICs
TC670 Demo Board	Demo Board for TC670 Predictive Fan Failure Detector
TC3400 Demo Board	Demo Board for TC340X Sigma-Delta ADCs
TC3400 Evaluation Kit	Evaluation Kit for TC340X Sigma-Delta ADCs

***Note:** Requires MXDEV® Analog Evaluation Kit.

Visit our web site at www.microchip.com for additional product information and your local sales office.

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