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Analog and Interface Product Selector Guide

Thermal Management • Motor Driver • Interface Peripherals
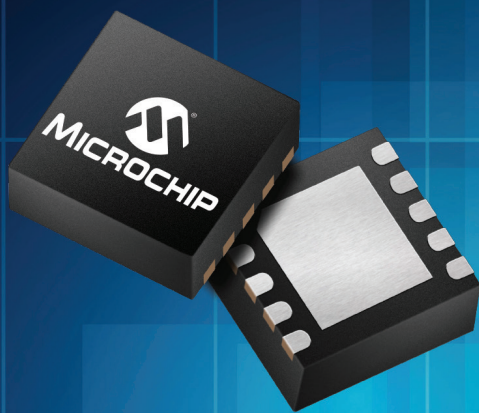*Power Management • Linear and Mixed Signal • Safety and Security*

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Are You Looking for Complete Analog and Interface Design Solutions?

Microchip's integrated analog technology, peripherals and features are engineered to meet today's demanding design requirements. Our broad spectrum of analog products addresses thermal management, power management, battery management, mixed-signal, linear, interface and safety and security solutions. Combined with Microchip's Intelligent Analog microcontrollers, our extensive analog portfolio can be used in thousands of high-performance design applications in the automotive, communications (wireless), consumer, computing and industrial control markets.

Our broad portfolio of stand-alone analog and interface devices offers highly integrated solutions that combine various analog functions in space-saving packages and support a variety of bus interfaces. Many of these devices support functionality that enhances the analog features currently available on PIC® microcontrollers.

Microchip Technology's Stand-Alone Analog and Interface Portfolio

Thermal Management
- Temperature Sensors
- Fan Speed Controllers/Fan Fault Detectors

Motor Drive
- Stepper and DC
- 3Φ Brushless DC Motor Driver

Power Management
- LDO & Switching Regulators
- Charge Pump DC/DC Converters
- Power MOSFET Drivers
- Digitally Enhanced and PWM Controllers
- System Supervisors
- Voltage Detectors
- Voltage References
- Li-Ion/Li-Polymer Battery Chargers
- Power MOSFETs

Linear
- Op Amps
- Instrumentation Amps
- Programmable Gain Amplifiers
- Comparators

Safety and Security
- Photoelectric Smoke Detectors
- Ionization Smoke Detectors
- Ionization Smoke Detector Front Ends
- Piezoelectric Horn Drivers

Mixed-Signal
- A/D Converter Families
- Digital Potentiometers
- D/A Converters
- V/F and F/V Converters
- Energy Measurement ICs
- Current/DC Power ICs

Interface
- CAN Peripherals
- Infrared Peripherals
- LIN Transceivers
- Serial Peripherals
- Ethernet ICs
- USB ICs

Want a Business Partner, Not Just a Vendor?

Successful companies recognize the value of a strategic supplier relationship to help them deliver innovative products to their markets in a timely manner. They trust their suppliers to furnish quality components for current design opportunities as well as provide technology road maps and innovative solutions to stay ahead of tomorrow's design trends.

Microchip Technology provides low-risk product development, lower total system cost and faster time to market to more than 45,000 of these successful companies worldwide. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality.

Founded in 1989, Microchip's business model is based on a series of guiding values that aim to establish successful customer partnerships by exceeding expectations for products, services and attitude. Continuous improvement, technology innovation and the pursuit of the highest quality possible drive Microchip's company culture.

The result is a worldwide organization dedicated to delivering whole product solutions which include high-performance silicon devices, easy-to-use development tools, outstanding technical support and sophisticated technical documentation.

Are Quality and Delivery a Concern?

Microchip's quality systems are certified according to the International Organization for Standards/Technical Specification (ISO/TS)-16949:2002 requirements. This demonstrates that the Company's quality systems meet the most stringent industry quality-management system standards, resulting in high-quality semiconductor products.

Direct control over manufacturing resources allows shortened design and production cycles. By owning the wafer fabrication facilities and the majority of the test and assembly operations, and by employing proprietary statistical process control techniques, Microchip has been able to achieve and maintain high production yields.

Need Additional Support and Resources?

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THERMAL MANAGEMENT

THERMAL MANAGEMENT PRODUCTS: Temperature Sensors

Part #	Typical Accuracy (°C)	Maximum Accuracy @ 25°C (°C)	Maximum Temperature Range (°C)	Vcc Range (V)	Maximum Supply Current (µA)	Features	Packages
Logic Output Temperature Sensors							
TC6501	±0.5	±3	−55 to +125	+2.7 to +5.5	40	Cross to MAX6501, Open-drain	5-pin SOT-23A
TC6502	±0.5	±3	−55 to +125	+2.7 to +5.5	40	Cross to MAX6502, Push-pull	5-pin SOT-23A
TC6503	±0.5	±3	−55 to +125	+2.7 to +5.5	40	Cross to MAX6503, Open-drain	5-pin SOT-23A
TC6504	±0.5	±3	−55 to +125	+2.7 to +5.5	40	Cross to MAX6504, Push-pull	5-pin SOT-23A
TC620	±1	±3	−40 to +125	+4.5 to +18	400	Two resistor-programmable trip points	8-pin PDIP, 8-pin SOIC
TC621	Note 1	Note 1	−40 to +85	+4.5 to +18	400	Requires external thermistor, resistor-programmable trip points	8-pin PDIP, 8-pin SOIC
TC622	±1	±5	−40 to +125	+4.5 to +18	600	Dual output, TO-220 for heat sink mounting, resistor-programmable trip points	8-pin PDIP, 8-pin SOIC, 5-pin TO-220
TC623	±1	±3	−40 to +125	+2.7 to +4.5	250	Two resistor-programmable trip points	8-pin PDIP, 8-pin SOIC
TC624	±1	±5	−40 to +125	+2.7 to +4.5	300	Dual output, resistor-programmable trip points	8-pin PDIP, 8-pin SOIC
MCP9501	±1	±4	−40 to +125	+2.7 to +5.5	40	Active-High, Push-Pull Output, Rising Temperature Switch	5-pin SOT-23
MCP9502	±1	±4	−40 to +125	+2.7 to +5.5	40	Active-Low, Open Drain Output, Rising Temperature Switch	5-pin SOT-23
MCP9503	±1	±4	−40 to +125	+2.7 to +5.5	40	Active-High, Push-Pull Output, Falling Temperature Switch	5-pin SOT-23
MCP9504	±1	±4	−40 to +125	+2.7 to +5.5	40	Active-Low, Open Drain Output, Falling Temperature Switch	5-pin SOT-23
MCP9509	±0.5	NS	−40 to +125	+2.7 to +5.5	50	Resistor-programmable temperature switch	5-pin SOT-23
MCP9510	±0.5	NS	−40 to +125	+2.7 to +5.5	80	Resistor-programmable temperature switch	6-pin SOT-23
Voltage Output Temperature Sensors							
MCP9700	±1	±4	−40 to +125	+2.3 to +5.5	12	Linear Active Thermistor® IC, Temperature slope: 10 mV/°C	3-pin TO-92, 5-pin SC-70, 3-pin SOT-23
MCP9701	±1	±4	−40 to +125	+3.1 to +5.5	12	Linear Active Thermistor IC, Temperature slope: 19.53 mV/°C, cross to MAX6612	3-pin TO-92, 5-pin SC-70, 3-pin SOT-23
MCP9700A	±1	±2	−40 to +125	+2.3 to +5.5	12	Linear Active Thermistor IC, Temperature slope: 10 mV/°C	3-pin TO-92, 5-pin SC-70, 3-pin SOT-23
MCP9701A	±1	±2	−40 to +125	+3.1 to +5.5	12	Linear Active Thermistor IC, Temperature slope: 19.53 mV/°C, cross to MAX6612	3-pin TO-92, 5-pin SC-70, 3-pin SOT-23
TC1046	±0.5	±2	−40 to +125	+2.7 to +4.4	60	High precision temperature-to-voltage converter, 6.25 mV/°C	3-pin SOT-23B
TC1047	±0.5	±2	−40 to +125	+2.7 to +4.4	60	High precision temperature-to-voltage converter, 10 mV/°C	3-pin SOT-23B
TC1047A	±0.5	±2	−40 to +125	+2.5 to +5.5	60	High precision temperature-to-voltage converter, 10 mV/°C	3-pin SOT-23B
Serial Output Temperature Sensors							
MCP9800	±0.5	±1	−55 to +125	+2.7 to +5.5	400	SMbus/I²C™ compatible interface, 0.0625°C to 0.5°C adj. resolution, Power-saving one-shot temperature measurement	5-pin SOT-23
MCP9801	±0.5	±1	−55 to +125	+2.7 to +5.5	400	SMbus/I²C compatible interface, 0.0625°C to 0.5°C adj. resolution, Power-saving one-shot temperature measurement, multi-drop capability	8-pin MSOP, 8-pin SOIC
MCP9802	±0.5	±1	−55 to +125	+2.7 to +5.5	400	SMbus/I²C compatible interface with time out, 0.0625°C to 0.5°C adj. resolution, Power-saving one-shot temperature measurement	5-pin SOT-23
MCP9803	±0.5	±1	−55 to +125	+2.7 to +5.5	400	SMbus/I²C compatible interface with time out, 0.0625°C to 0.5°C adj. resolution, Power-saving one-shot temperature measurement, Multi-drop capability	8-pin MSOP, 8-pin SOIC
MCP9804	±0.25	±1	−40 to +125	+2.7 to +5.5	400	User programmable temperature limits with alert output, 1°C temp. accuracy from −40°C to +125°C	8-pin MSOP, 8-pin 2 × 3 DFN
MCP9805	±0.5	±1[2]	−20 to +125	+3.0 to +3.6	400	JEDEC compatible register set, SMbus/I²C compatible interface, Programmable, Shut-down modes and EVENT output	8-pin TSSOP, 8-pin 2 × 3 DFN
MCP9808	±0.25	±0.5	−40 to +125	+2.7 to +5.5	400	0.5°C temperature accuracy from −10°C to +100°C	8-pin 2 × 3 DFN, 8-pin MSOP
MCP9843	±0.5	±1[2]	−20 to +125	+3.0 to +3.6	500	Compliant to JEDEC TS2002 specification	8-pin TSSOP, 8-pin 2 × 3 DFN, 8-pin 2 × 3 TDFN
MCP98242	±0.5	±1[2]	−20 to +125	+3.0 to +3.6	400	Same temperature sensor as MCP9805 plus integrated DDR2 Serial Presence Detect EEPROM	8-pin TSSOP, 8-pin 2 × 3 DFN
MCP98243	±1	±3	−40 to +125	+3.0 to +3.6	500	Serial output temperature sensor with integrated EEPROM	8-pin TSSOP, 8-pin 2 × 3 DFN, 8-pin 2 × 3 TDFN
MCP98244	±0.5	±3	−40 to +125	+1.7 to +3.6	500	Serial output temperature sensor with integrated EEPROM (TES2004)	8-pin TSSOP, 8-pin 2 × 3 DFN, 8-pin 2 × 3 TDFN
MCP9844	±0.5	±3	−40 to +125	+1.7 to +1.9	500	Serial output temperature sensor with integrated EEPROM (TES2004)	8-pin TSSOP, 8-pin 2 × 3 DFN, 8-pin 2 × 3 TDFN

Note 1: These devices use an external temperature sensor. Accuracy of the total solution is a function of the accuracy of the external sensor.
　　　2: Maximum accuracy measured at 85°C.

Serial Output Temperature Sensors (Continued)							
Part #	Typical Accuracy (°C)	Maximum Accuracy @ 25°C (°C)	Maximum Temperature Range (°C)	Vcc Range (V)	Maximum Supply Current (µA)	Features	Packages
TC77	±0.5	±1	−55 to +125	+2.7 to +5.5	400	SPI compatible interface, 0.0625°C temperature resolution	5-pin SOT-23A, 8-pin SOIC
TC72	±0.5	±1	−55 to +125	+2.65 to +5.5	400	SPI compatible interface, Power-saving one-shot temperature measurement, 0.25°C temperature resolution	8-pin MSOP, 8-pin 3 × 3 DFN
TC74	±0.5	±2	−40 to +125	+2.7 to +5.5	350	SMbus/I²C compatible interface, 1°C temperature resolution	5-pin SOT-23A, 5-pin TO-220
TCN75A	±0.5	±2	−40 to +125	+2.7 to +5.5	500	SMbus/I²C compatible interface, power-saving one-shot temperature measurement, multi-drop capability, 0.0625°C to 0.5°C adjustable temperature resolution	8-pin MSOP, 8-pin SOIC
TCN75	±0.5	±2	−55 to +125	+2.7 to +5.5	1,000[3]	SMbus/I²C compatible interface, multi-drop capability, interrupt output, 0.5°C temperature resolution	8-pin MSOP, 8-pin SOIC
EMC1001	±0.5	±1.5	−25 to +125	3.0–3.6	50	1.5°C SMBus/I²C Ambient with 2 Alerts	6-pin SOT

Serial Output Temperature Sensors with Remote Diode Monitors											
Part #	# of Remote Temp. Sensors	Typical Accuracy (°C)	Maximum Accuracy @ 25°C (°C)	Maximum Temperature Range (°C)	Ambient Temp. Sensor	Alert/ THERM	Hardware Shutdown	Vcc Range (V)	Typical Supply Current (µA)	Description and Additional Features	Packages
EMC1033	2	±1.0	±3	−40 to +125	1	2	–	3.0–3.6	50	Triple SMBus/I²C™ Sensor with Resistance Error Correction	8-pin MSOP
EMC1043	2	±0.5	±1.0	−40 to +125	1	–	–	3.0–3.6	105	Triple SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Hotter of Two Zones	8-pin MSOP
EMC1046	5	±0.25	±1.0	−40 to +125	1	–	–	3.0–3.6	395	Sextuple SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Hottest of Thermal Zones	10-pin MSOP
EMC1047	6	±0.25	±1.0	−40 to +125	1	–	–	3.0–3.6	395	Septuple SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Hottest of Thermal Zones	10-pin MSOP
EMC1053	2	±0.5	±1.0	−40 to +125	1	–	–	3.0–3.6	105	Triple SMBus/I²C Sensor with Resistance Error Correction and Hotter of Two Zones	8-pin MSOP
EMC1063	2	±0.5	±1.0	−40 to +125	1		–	3.0–3.6	105	Triple SMBus/I²C Sensor with Hotter of Two Zones	8-pin MSOP
EMC1072	1	±0.25	±1.0	−40 to +125	1	2	–	3.0–3.6	430	Dual SMBus/I²C Sensor with Selectable Address	8-pin MSOP
EMC1073	2	±0.25	±1.0	−40 to +125	1	2	–	3.0–3.6	430	Triple SMBus/I²C Sensor with Selectable Address	10-pin MSOP
EMC1074	3	±0.25	±1.0	−40 to +125	1	2	–	3.0–3.6	430	Quad SMBus/I²C Sensor with Selectable Address	10-pin MSOP
EMC1182	1	±0.25	±1.0	−40 to +125	1	2	-	3.0–3.6	200	Dual Channel 1.8V SMBus/I²C Temperature Sensor with Resistance Error Correction, Beta Compensation	8-pin TDFN, 8-pin DFN
EMC1183	2	±0.25	±1.0	−40 to +125	1	2	-	3.0–3.6	200	Triple Channel 1.8V SMBus/I²C Temperature Sensor with Resistance Error Correction, Beta Compensation	10-pin DFN
EMC1184	3	±0.25	±1.0	−40 to +125	1	2	-	3.0–3.6	200	Quad Channel 1.8V SMBus/I²C Temperature Sensor with Resistance Error Correction, Beta Compensation	10-pin DFN
EMC1186	1	±0.25	±1.0	−40 to +125	1	1	1	3.0–3.6	200	Dual Channel 1.8V SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Resistor Settable Hardware Thermal Shutdown	8-pin TDFN
EMC1187	2	±0.25	±1.0	−40 to +125	1	1	1	3.0–3.6	200	Triple Channel 1.8V SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Resistor Settable Hardware Thermal Shutdown	10-pin DFN
EMC1188	3	±0.25	±1.0	−40 to +125	1	1	1	3.0–3.6	200	Quad Channel 1.8V SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Resistor Settable Hardware Thermal Shutdown	10-pin DFN
EMC1412	1	±0.25	±1.0	−40 to +125	1	2	–	3.0–3.6	430	Dual SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Selectable Address	8-pin TDFN, 8-pin MSOP
EMC1413	2	±0.25	±1.0	−40 to +125	1	2	–	3.0–3.6	430	Triple SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Selectable Address	10-pin DFN, 10-pin MSOP
EMC1414	3	±0.25	±1.0	−40 to +125	1	2	–	3.0–3.6	430	Quad SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Selectable Address	10-pin MSOP, 10-pin DFN
EMC1422	1	±0.25	±1.0	−40 to +125	1	1	1	3.0–3.6	430	Dual SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Resistor Settable Hardware Thermal Shutdown	8-pin MSOP
EMC1423	2	±0.25	±1.0	−40 to +125	1	1	1	3.0–3.6	430	Triple SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Resistor Settable Hardware Thermal Shutdown	10-pin MSOP
EMC1424	3	±0.25	±1.0	−40 to +125	1	1	1	3.0–3.6	430	Quad SMBus/I²C Sensor with Resistance Error Correction, Beta Compensation and Resistor Settable Hardware Thermal Shutdown	10-pin MSOP
EMC1428	7	±0.25	±1.0	−40 to +125	1	1	1	3.0–3.6	450	Octal SMBus/I²C Sensor Resistance Error Correction, Beta Compensation and Resistor Settable Hardware Thermal Shutdown and Hottest of Thermal Zones	16-pin QFN

Note 1: These devices use an external temperature sensor. Accuracy of the total solution is a function of the accuracy of the external sensor.
   2: Maximum accuracy measured at 85°C.
   3: TCN75 idle current is 250 mA. This device also has a Software Shutdown mode that reduces supply current to < 1 mA.

THERMAL MANAGEMENT PRODUCTS: Open Loop Fan Controllers and Fan Fault Detectors

Part #	Description	# of Temp. Monitors	Typical Accuracy (°C)	Maximum Accuracy @ 25°C (°C)	Maximum Temperature Range (°C)	Vcc Range (V)	Maximum Supply Current (µA)	Features	Packages
EMC2101	Single SMBus I²C™ Fan Manager	2	±0.5	±1	−40 to +125	+3.0 to +3.6	1,000	Fan Controller with high frequency PWM driver, programmable fan speed table and alert	8-pin MSOP, 8-pin SOIC
EMC2300	Triple SMBus I²C Fan Manager	3	±0.25	±3	−0 to +70	+3.0 to +3.6	3,000	Fan Controller with high frequency PWM driver, programmable fan speed table, voltage monitors, alert	16-pin SSOP
EMC6D103S	Triple SMBus I²C Fan Manager	3	±0.25	±3	−0 to +70	+3.0 to +3.6	3,000	Fan Controller with high frequency PWM driver, programmable fan speed table, voltage monitors, alert	24-pin SSOP1
TC642	Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	1,000	FanSense™ Fan Monitor, Minimum fan speed control	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
TC642B	Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	400	FanSense Fan Monitor, Minimum fan speed control, Fan auto-restart	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
TC646	Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	1,000	FanSense Fan Monitor, Auto-shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
TC646B	Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	400	FanSense Fan Monitor, Auto-shutdown, Fan auto-restart	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
TC647	Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	1,000	FanSense Fan Monitor, Minimum fan speed control	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
TC647B	Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	400	FanSense Fan Monitor, Minimum fan speed control, Fan auto-restart	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
TC648	Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	1,000	Overtemperature alert, Auto-shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
TC648B	Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	400	Overtemperature alert, Auto-shutdown, Fan auto-restart	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
TC649	Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	1,000	FanSense Fan Monitor, Auto-shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
TC649B	Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	400	FanSense Fan Monitor, Auto-shutdown, Fan auto-restart	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
TC650	Fan Manager	1	±1	±3	−40 to +125	+2.8 to +5.5	90	Overtemperature alert	8-pin MSOP
TC651	Fan Manager	1	±1	±3	−40 to +125	+2.8 to +5.5	90	Overtemperature alert, Auto-shutdown	8-pin MSOP
TC652	Fan Manager	1	±1	±3	−40 to +125	+2.8 to +5.5	90	FanSense Fan Monitor, Overtemperature alert	8-pin MSOP
TC653	Fan Manager	1	±1	±3	−40 to +125	+2.8 to +5.5	90	FanSense Fan Monitor, Overtemperature alert, Auto-shutdown	8-pin MSOP
TC654	Dual SMbus Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	320	FanSense Fan Monitor, RPM data	10-pin MSOP
TC655	Dual SMbus Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	320	FanSense Fan Monitor, RPM data, Overtemperature alert	10-pin MSOP
TC664	Single SMbus Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	320	FanSense Fan Monitor, RPM data	10-pin MSOP
TC665	Single SMbus Fan Manager	1	Note 1	Note 1	−40 to +85	+3.0 to +5.5	320	FanSense Fan Monitor, RPM data, Overtemperature alert	10-pin MSOP
TC670	Predictive Fan Fault Detector	1	N/A	N/A	−40 to +85	+3.0 to +5.5	150	FanSense Fan Monitor, Programmable threshold	6-pin SOT-23

Note 1: These devices use an external temperature sensor. Accuracy of the total solution is a function of the accuracy of the external sensor.

THERMAL MANAGEMENT PRODUCTS: Closed Loop Fan Controllers with SMBus/I²C™ Interface

Part #	# of Fan Drivers	PWM/Linear Control	# of Remote Temp. Monitors	Ambient Temp. Sensor	Typical Accuracy (°C)	Maximum Accuracy @ 25°C (°C)	Maximum Temperature Range (°C)	Vcc Range (V)	SMBus Alert	System Shutdown	Voltage Monitors	Description	Packages
EMC2112	1	Linear	3	1	±0.25	±1.0	0 to +85	+3.3 and +5	Yes	Yes	No	RPM-Based Fan Controller with HW Thermal Shutdown	20-pin QFN
EMC2103-1	1	PWM	1	1	±0.5	±1.0	−40 to +125	+3.0 to +3.6	Yes	Yes	No	RPM-Based Fan Controller with Hardware Thermal Shutdown	12-pin QFN
EMC2103-2	1	PWM	3	1	±0.5	±1.0	−40 to +125	+3.0 to +3.6	Yes	Yes	No	RPM-Based Fan Controller with Hardware Thermal Shutdown	16-pin QFN
EMC2103-4	1	PWM	3	1	±0.5	±1.0	−40 to +125	+3.0 to +3.6	Yes	Yes	No	RPM-Based Fan Controller with Hardware Thermal Shutdown and EEPROM loadable	16-pin QFN
EMC2104	2	PWM	4	1	±0.25	±1.0	−40 to +85	+3.0 to +3.6	Yes	Yes	Yes	Dual RPM-Based PWM Fan Controller with Hardware Thermal Shutdown	20-pin QFN
EMC2105	1	Linear	4	1	±0.25	±1.0	−40 to +85	+3.3 and +5.0	Yes	Yes	Yes	RPM-Based High Side Fan Controller with Hardware Thermal Shutdown	20-pin QFN

Part #	# of Fan Drivers	PWM/Linear Control	# of Remote Temp. Monitors	Ambient Temp. Sensor	Typical Accuracy (°C)	Maximum Accuracy @ 25°C (°C)	Maximum Temperature Range (°C)	Vcc Range (V)	SMBus Alert	System Shutdown	Voltage Monitors	Description	Packages
EMC2106	2	PWM and Linear	4	1	±0.25	±1.0	−40 to +85	+3.3 and +5.0	Yes	Yes	Yes	RPM-Based High Side Fan Controller with Hardware Thermal Shutdown	
EMC2113	1	PWM	3	1	±0.5	±1.0	−40 to +125	+3.0 to +3.6	Yes	Yes	No	Single RPM-Based Fan Controller with Multiple Temperature Zones and Hardware Thermal Shutdown	16-pin QFN
EMC2301	1	PWM	N/A	N/A	N/A	N/A	−40 to +125	+3.0 to +3.6	Yes	No	N/A	Single RPM-Based PWM Fan Speed Controller	8-pin MSOP
EMC2302	2	PWM	N/A	N/A	N/A	N/A	−40 to +125	+3.0 to +3.6	Yes	No	N/A	Dual RPM-Based PWM Fan Speed Controller	10-pin MSOP
EMC2303	3	PWM	N/A	N/A	N/A	N/A	−40 to +125	+3.0 to +3.6	Yes	No	N/A	Triple RPM-Based PWM Fan Speed Controller	12-pin QFN
EMC2305	5	PWM	N/A	N/A	N/A	N/A	−40 to +125	+3.0 to +3.6	Yes	No	N/A	Penta RPM-Based PWM Fan Speed Controller	16-pin QFN

MOTOR DRIVERS

Part #	Motor Type	Input Voltage Range (V)	Internal/ External FETs	Output Current (mA)	Control Scheme	Motor Speed Output	Protections	Temperature Operating Range (°C)	Features	Packages
MCP8024	3-Phase Brushless Motors	6.0 to 28.0	External	500	Direct PWM	N/A	UVLO, OVLO, 48V Load Dump, Thermal Shutdown, Overcurrent Output	−40 to +150	3 Op Amps, Adj. Buck Regulator, 5V LDO, 12V LDO, Thermal Warning, Dead Time, Blanking Time, Level Translator, Motor Enable	40-pin 5 × 5 QFN, 48-pin 7 × 7 TQFP
MCP8063	3-Phase Brushless Motor	2.0 to 14.0	Internal	750	Sensorless Sinusoidal	Frequency Generator	Overtemperature, Motor Lock-up, Overcurrent, Overvoltage	−40 to +125	3-Phase BLDC 180° Sinusoidal Sensorless Fan Motor Driver, Overcurrent limitation, Output Switching Frequency at 23 kHz	Thermall Enhanced 8-pin 4 × 4 DFN
MTS62C19A	One Bipolar Stepper Motor or Two DC Motors	10.0 to 40.0	Internal	750	Direct PWM Input, Current Limit Control, Microstepping	No	Overtemperature, Under Voltage	−40 to +105	Dual Full Bridge Motor Driver for Stepper Motors, Pin compatible with Allegro 6219	24-pin SOIC
MTS2916A	One Bipolar Stepper Motor or Two DC Motors	10.0 to 40.0	Internal	750	Direct PWM Input, Current Limit Control, Microstepping	No	Overtemperature, Under Voltage	−40 to +105	Dual Full Bridge Motor Driver for Stepper Motors, Pin compatible with Allegro 2916	24-pin SOIC
MTD6501C	3-Phase Brushelss Motor	2.0 to 14.0	Internal	800	Sensorless Sinusoidal	Frequency Generator	Overtemperature, Motor Lock-up, Overcurrent, Overvoltage	−30 to +95	3-Phase BLDC 180° Sinusoidal Sensorless Fan Motor Driver, Overcurrent limitation, Output Switching Frequency at 20 kHz	Thermally Enhanced 8-pin SOP
MTD6501D	3-Phase Brushelss Motor	2.0 to 14.0	Internal	500	Sensorless Sinusoidal	Frequency Generator	Overtemperature, Motor Lock-up, Overcurrent, Overvoltage	−30 to +95	3-Phase BLDC 180° Sinusoidal Sensorless Fan Motor Driver, Boost Mode, Overcurrent limitation, Output Switching Frequency at 20 kHz	10-pin MSOP
MTD6501G	3-Phase Brushelss Motor	2.0 to 14.0	Internal	800	Sensorless Sinusoidal	Frequency Generator	Overtemperature, Motor Lock-up, Overcurrent, Overvoltage	−30 to +95	3-Phase BLDC 180° Sinusoidal Sensorless Fan Motor Driver, Overcurrent limitation, Output Switching Frequency at 23 kHz	Thermally Enhanced 8-pin SOP
MTD6502B	3-Phase Brushelss Motor	2.0 to 5.5	Internal	750	Sensorless Sinusoidal	Frequency Generator	Overtemperature, Motor Lock-up, Overcurrent, Overvoltage	−40 to +125	3-Phase BLDC Sinusoidal Sensorless Fan Motor Driver, Direction control, Overcurrent limitation, Output Switching Frequency at 30 kHz	10-pin 3 × 3 TDFN
MTD6505	3-Phase Brushelss Motor	2.0 to 5.5	Internal	750	Sensorless Sinusoidal	Frequency Generator	Overcurrent, Overvoltage, Overtemperature, Motor Lock-up	−40 to +125	180° Sinusoidal Sensorless Drive, Direction Control, Programmable BEMF Coefficient Range, Output Switching Frequency at 30 kHz	10-pin 3 × 3 UDFN

POWER MANAGEMENT

Part #	Vcc Range (V)	Output Voltage (V)	Max. Load Current (mA)	Initial Accuracy (max.%)	Temperature Coefficient (ppm/°C)	Maximum Supply Current (µA @ 25°C)	Packages
MCP1525	2.7 to 5.5	2.5	±2	±1	50	100	3-pin TO-92, 3-pin SOT-23B
MCP1541	4.3 to 5.5	4.096	±2	±1	50	100	3-pin TO-92, 3-pin SOT-23B

POWER MANAGEMENT: Linear Regulators

Part #	Output Current (mA)	Max. Input Voltage (V)	Output Voltage Range (V)	Typical Quiescent Current (µA)	Typical Dropout Voltage (at max I_{OUT}, mV)	PSRR (typical dB)	Typical Output Voltage Accuracy (%)	Features	Packages
Low-Dropout Linear Regulators									
TC1072	50	6.0	1.8 to 5.0	50	85	64	0.5	Low noise, fast transient response, shutdown, error output	6-pin SOT-23
TC1014	50	6.0	1.8 to 5.0	50	85	64	0.5	Reference bypass	5-pin SOT-23
TC1054	50	6.5	1.8 to 5.0	50	85	64	0.5	Error Output	5-pin SOT-23
TC1070	50	6.0	1.2 to 5.5	50	85	64	0.5	Adjustable output	5-pin SOT-23
TC2014	50	6.0	1.8 to 5.0	55	45	55	0.4	Low noise, fast transient response, shutdown, bypass pin	5-pin SOT-23A
TC2054	50	6.0	1.8 to 5.0	55	45	50	0.4	Low noise, fast transient response, shutdown, error output	5-pin SOT-23A
TC1223	50	6.0	2.5 to 5.0	50	85	64	0.5	Shutdown	5-pin SOT-23A
MCP1790	70	30.0	3.0, 3.3, 5.0	70	700	90	0.2	Load dump protected, fast transient response	3-pin SOT-223
MCP1791	70	30.0	3.0, 3.3, 5.0	70	700	90	0.2	Load dump protected, fast transient response, shutdown, powergood	5-pin SOT-223
TC1016	80	6.0	1.8 to 4.0	53	150	58	0.5	Fast transient response	5-pin SOT-23, 5 pin-SC-70
TC1073	100	6.0	1.8 to 5.0	50	180	64	0.5	Low noise, fast transient response, shutdown, error output	6-pin SOT-23
TC1015	100	6.0	1.8 to 5.0	50	180	64	0.5	Reference bypass	5-pin SOT-23
TC1055	100	6.5	1.8 to 5.0	50	180	64	0.5	Error Output	5-pin SOT-23
TC1071	100	6.0	1.2 to 5.5	50	180	64	0.5	Adjustable output	5-pin SOT-23
TC2015	100	6.0	1.8 to 5.0	55	90	55	0.4	Low noise, fast transient response, shutdown, bypass pin	5-pin SOT-23A
TC2055	100	6.0	1.8 to 5.0	55	90	50	0.4	Low noise, fast transient response, shutdown, error output	5-pin SOT-23A
TC1224	100	6.0	2.5 to 5.0	50	180	64	0.5	Shutdown	5-pin SOT-23A
TC1188	120	6.0	1.8 to 3.15	50	120	80	–	Shutdown	5-pin SOT-23A
TC1189	120	6.0	1.8 to 3.15	50	120	80	–	Shutdown, output capacitor discharge	5-pin SOT-23A
TC1186	150	6.5	1.8 to 5.0	50	270	64	0.5	Error Output	5-pin SOT-23
TC1017	150	6.0	1.8 to 4.0	53	285	58	0.5	Shutdown	5-pin SOT-23 and 5-pin SC-70
TC1185	150	6.0	1.8 to 5.0	50	270	64	0.5	Reference bypass	5-pin SOT-23
TC1187	150	6.0	1.2 to 5.5	50	270	64	0.5	Adjustable output	5-pin SOT-23
MCP1754	150	16.0	1.8 to 5.5	56	300	72	0.2	Powergood, shutdown	5-pin SOT-23, 5-pin SOT-223, 8-pin 2 × 3 DFN
MCP1754S	150	16.0	1.8 to 5.5	56	300	72	0.2	–	3-pin SOT-23, 3-pin SOT89, 3-pin SOT-223, 8-pin 2 × 3 DFN
MCP1804	150	28.0	1.8 to 18	50	260 at 20 mA	50	2	Shutdown version	5-pin SOT-23, 5 pin SOT-89, 3-pin SOT-89, 3-pin SOT-223
TC2185	150	6.0	1.8 to 5.0	55	140	55	0.4	Low noise, fast transient response, shutdown, bypass pin	5-pin SOT-23A
TC2186	150	6.0	1.8 to 5.0	55	140	50	0.4	Low noise, fast transient response, shutdown, error output	5-pin SOT-23A
MCP1710	200	5.5	1.2 to 4.2	0.02	450	22	–	Extremely low Iq, small outline package, shutdown	8-pin 2 × 2 VDFN
MCP1700	250	6.0	1.2 to 5.0	1.6	178	44	0.4	Very low Iq, small outline package options	3-pin SOT-23, 3-pin SOT-89, 3-pin TO-92, 6-pin 2 × 2 DFN
MCP1702	250	13.2	1.2 to 5.5	2.0	625	44	0.4	Very low Iq	3-pin SOT-23A, 3-pin SOT-89, 3-pin TO-92
MCP1703A	250	16.0	1.2 to 5.5	2.0	625	35	0.4	Very low Iq, low ground pin current in dropout	3-pin SOT-23A, 3-pin SOT-89, 3-pin SOT-223, 8-pin 2 × 3 DFN
MCP1755	300	16.0	1.8 to 5.5	68	300	80	0.85	Powergood, shutdown	5-pin SOT-23, 5-pin SOT-223, 8-pin 2 × 3 DFN
MCP1755S	300	16.0	1.8 to 5.5	68	300	80	0.85	–	3-pin SOT-223, 8-pin 2 × 3 DFN
MCP1824	300	6.0	0.8 to 5.0	120	200	55	0.4	Fast transient response, shutdown, powergood	5-pin SOT-23, 5-pin SOT-223
MCP1824S	300	6.0	0.8 to 5.0	120	200	55	0.4	Fast transient response	3-pin SOT-223
TC1107	300	6.0	2.5 to 5.0	50	240	60	0.5	Low noise, fast transient response, shutdown, bypass pin	8-pin SOIC, 8-pin MSOP
TC1108	300	6.0	2.5 to 5.0	50	240	60	0.5	Low noise, fast transient response	3-pin SOT-223

POWER MANAGEMENT: Linear Regulators (Continued)

Part #	Output Current (mA)	Max. Input Voltage (V)	Output Voltage Range (V)	Typical Quiescent Current (µA)	Typical Dropout Voltage (at max I_{OUT}, mV)	PSRR (typical dB)	Typical Output Voltage Accuracy (%)	Features	Packages
Low-Dropout Linear Regulators (Continued)									
TC1173	300	6.0	2.5 to 5.0	50	240	60	0.5	Low noise, fast transient response, shutdown, bypass pin, error output	8-pin SOIC, 8-pin MSOP
TC1174	300	6.0	-	50	270	60	-	Adjustable output	8-pin SOIC, 8-pin MSOP
TC1269	300	6.0	2.5 to 5.0	50	240	50	0.5	Low noise, fast transient response, shutdown, bypass pin	8-pin MSOP
TC1262	500	6.0	1.8 to 5.0	80	350	64	0.5	Low noise, fast transient response	3-pin SOT-223
MCP1725	500	6.0	0.8 to 5.0	120	210	60	0.5/0.4/0.5	Fast transient response, shutdown, adjustable delay powergood, adjustable output version	8-pin SOIC-8, 8-pin 2 × 3 DFN
MCP1825	500	6.0	0.8 to 5.0	120	210	60	0.5	Fast transient response, shutdown, powergood	5-pin SOT-223
MCP1825S	500	6.0	0.8 to 5.0	120	210	60	0.5	Fast transient response	3-pin SOT-223
TC1263	500	6.0	2.5 to 5.0	80	350	64	0.5	Low noise, fast transient response, shutdown, bypass pin	8-pin SOIC
TC1264	800	6.0	1.8 to 5.0	80	450	64	0.5	Low noise, fast transient response	3-pin SOT-223
TC1265	800	6.0	1.8 to 3.3	80	450	64	0.5	Low noise, fast transient response, shutdown, bypass pin	8-pin SOIC
TC2117	800	6.0	1.8 to 3.3	80	1200	55	0.5	Low noise, fast transient response	3-pin SOT-223
MCP1726	1000	6.0	0.8 to 5.0	140	220	54	0.5/0.4/0.5	Fast transient response, shutdown, adjustable delay powergood, adjustable output version	8-pin SOIC-8, 8-pin 3 × 3 DFN
MCP1826	1000	6.0	0.8 to 5.0	120	250	60	0.5	Fast transient response, shutdown, powergood	5-pin SOT-223
MCP1826S	1000	6.0	0.8 to 5.0	120	250	60	0.5	Fast transient response	3-pin SOT-223
MCP1727	1500	6.0	0.8 to 5.0	120	330	60	0.5/0.4/0.5	Fast transient response, shutdown, adjustable delay powergood, adjustable output version	8-pin SOIC-8, 8-pin 3 × 3 DFN
MCP1827	1500	6.0	0.8 to 5.0	120	330	60	0.5	Fast transient response, shutdown, powergood	5-pin DDPAK, 5-pin TO-220
MCP1827S	1500	6.0	0.8 to 5.0	120	330	60	0.5	Fast transient response	3-pin DDPAK, 3-pin TO-220
Negative Voltage Linear Regulators									
TC59	100	-10	-3.0 to -5.0	3	380	50	2	Negative LDO	3-pin SOT23A
Combination and Multiple Output Linear Regulators									
TC1300	300	6.0	2.5 to 3.0	80	210	60	0.5	Shutdown, bypass, undervoltage detection and reset signal generation	8-pin MSOP
TC1301A	300 150	6.0	1.5 to 3.3	103	104/150	58	0.5	Dual output LDO, reset, bypass pin, and shutdown pin for second output	8-pin MSOP, 8-pin 3 × 3 DFN
TC1301B	300/150	6.0	1.5 to 3.3	114	104/150	58	0.5	Dual output LDO, reset, bypass pin, and shutdown pins for both outputs	8-pin MSOP, 8-pin 3 × 3 DFN
TC1302A	300/150	6.0	1.5 to 3.3	103	104/150	58	0.5	Dual output LDO, bypass pin, and shutdown pin for second output	8-pin MSOP, 8-pin 3 × 3 DFN
TC1302B	300/150	6.0	1.5 to 3.3	114	104/150	58	0.5	Dual output LDO, bypass pin, and shutdown pins for both outputs	8-pin MSOP, 8-pin 3 × 3 DFN
TC1307	150	6.0	1.8 to 3.0	220	100	60	0.5	Four channel LDO, independent shutdown pins, selectable output voltages	16-pin QSOP

POWER MANAGEMENT: Switching Regulators

Part #	Description	Input Voltage Range (V)	Output Voltage (V)	Operating Temperature Range (°C)	Control Scheme	Switching Frequency (kHz)	Typical Active Current (µA)	Output Current (mA)	Features	Packages
MCP1601	Synchronous Buck Regulator	2.7 to 5.5	0.9V to V$_{IN}$	−40 to +85	PFM/PWM/LDO	750	825 (PWM) 125 (PFM)	500	UVLO, Auto-switching, LDO	8-pin MSOP
MCP1602	Synchronous Buck Regulator	2.7 to 5.5	0.8 to 4.5	−40 to +85	PFM/PWM	2000	35	500	PFM, PWM auto-switching, UVLO, Soft start, Power good indicator	10-pin MSOP, 10-pin 3 × 3 DFN
MCP1603	Synchronous Buck Regulator	2.7 to 5.5	0.8 to 4.0	−40 to +85	PFM/PWM	2000	45	500	Overtemperature and Overcurrent protection	5-pin TSOT-23, 8-pin 2 × 3 DFN
MCP1612	Synchronous Buck Regulator	2.7 to 5.5	0.8 to 5.5	−40 to +85	Constant frequency, PWM	1400	5000	1000	Overall efficiency > 94%, Soft start, Overtemperature and Overcurrent protection	8-pin MSOP, 8-pin 3 × 3 DFN
MCP1623/4	Synchronous Boost Regulator	0.65 to 6.0	2.0 to 5.5	−40 to +85	PWM or PWM/PFM	500	19	175	Integrated synchronous boost regulator, 0.65V start-up voltage, Soft start, True load disconnect	6-pin SOT-23, 8-pin 2 × 3 DFN
MCP16311	30V Input, 1A, Synchronous Buck Switching Regulator	4.4 to 30.0	2.0 to 24.0	−40 to +125	PFM/PFM	500	44	1000	PFM/PWM operation, enable function	8-pin MSOP, 8-pin 2 × 3 TDFN
MCP16312	30V Input, 1A, Synchronous Buck Switching Regulator	4.4 to 30.0	2.0 to 24.0	−40 to +125	PWM	500	3800	1000	PWM operation, enable function	8-pin MSOP, 8-pin 2 × 3 TDFN
MCP16251	Low Quiscent Current Synchronous Boost Regulator	0.82 to 5.5	1.8 to 5.5	−40 to +85	PFM/PWM	500	4	250	True Load Disconnect Shutdown	6-pin SOT-23, 8-pin 2 × 3 DFN
MCP16252	Low Quiscent Current Synchronous Boost Regulator	0.82 to 5.5	1.8 to 5.5	−40 to +85	PFM/PWM	500	4	250	Input to Output Bypass Shutdown	6-pin SOT-23, 8-pin 2 × 3 DFN
MCP1640/B/C/D	Synchronous Boost Regulator	0.65 to 6	2.0 to 5.5	−40 to +85	PWM or PWM/PFM	500	19	350	Integrated synchronous boost regulator, 0.65V start-up voltage, Soft start, True load disconnect or input-to-output bypass option	6-pin SOT-23, 8-pin 2 × 3 DFN
MCP1643	Synchronous Boost LED Driver	0.5	0.6 to 5.0	−40 to +85	PWM	1000	–	550	True Load Disconnect, Shutdown	8-pin 2 × 3 DFN, 8-pin MSOP
MCP1650	Step-up DC/DC Controller	2.7 to 5.5	2.5 to ext. tx limited	−40 to +125	Constant frequency	750	120	560/440	2 duty cycles for min. and max. loads, Shutdown control, UVLO, Soft start	8-pin MSOP
MCP1651	Step-up DC/DC Controller	2.7 to 5.5	2.5 to ext. tx limited	−40 to +125	Constant frequency, 2 fixed DC	750	120	560/440	2 duty cycles for min. and max. loads, Shutdown control, low battery detect, UVLO, Soft start	8-pin MSOP
MCP1652	Step-up DC/DC Controller	2.7 to 5.5	2.5 to ext. tx limited	−40 to +125	Constant frequency, 2 fixed DC	750	120	560/440	2 duty cycles for min. and max. loads, Shutdown control, Power good indicator, UVLO, Soft start	8-pin MSOP
MCP1653	Step-up DC/DC Controller	2.7 to 5.5	2.5 to ext. tx limited	−40 to +125	Constant frequency, 2 fixed DC	750	120	560/440	2 duty cycles for min. and max. loads, Shutdown control, Low battery detect, Power good indicator, UVLO, Soft start	10-pin MSOP
MCP16301	30V Input Buck Regulator	4.0 to 30	2.0 to 15	−40 to +85	PWM	500	2000	600	Integrated N-channel, UVLO, Soft start, Overtemperature protection	SOT23-6
MCP16321	Synchronous Buck Regulator	6 to 24	0.9 to 5	−40 to +125	PWM/PFM	1000	2300	1000	Integrated switches, Internal compensation, Peak current mode control, Soft-start, UVLO, Power good pin	16-pin 3 × 3 QFN
MCP16322	Synchronous Buck Regulator	6 to 24	0.9 to 5	−40 to +125	PWM/PFM	1000	2300	2000	Integrated switches, Internal compensation, Peak current mode control, Soft-start, UVLO, Power good pin	16-pin 3 × 3 QFN
MCP16323	Synchronous Buck Regulator	6 to 18	0.9 to 5	−40 to +125	PWM/PFM	1000	2300	3000	Integrated switches, Internal compensation, Peak current mode control, Soft-start, UVLO, Power good pin	16-pin 3 × 3 QFN
TC105	Step-down DC/DC Controller	2.2 to 10	3.0, 3.3, 5.0	−40 to +85	PFM/PWM	300	57	1,000	Low power shutdown mod	5-pin SOT-23A
TC115	Step-up DC/DC Regulator	0.9 to 10	3.0, 3.3, 5.0	−40 to +85	PFM/PWM	100	80	140	Feedback voltage sensing, Low power shutdown mode	5-pin SOT-89
TC110	Step-up DC/DC Controller	2.0 to 10	3.0, 3.3, 5.0	−40 to +85	PFM/PWM	100/300	50/120	300	Soft start, Low power shutdown mode	5-pin SOT-23A

POWER MANAGEMENT: Switching Regulators Combination Products

Part #	Description	Input Voltage Range (V)	Output Voltage (V)	Operating Temperature Range (°C)	Control Scheme	Switching Frequency (kHz)	Typical Active Current (µA)	Output Current (mA)	Features	Packages
TC1303	Synchronous Buck Regulator, LDO w/Power good	2.7 to 5.5	DC/DC: 0.8 to 4.5 LDO: 1.5 to 3.3	−40 to +85	PFM/PWM	2000	65/600	DC/DC: 500 mA LDO: 300 mA	PFM/PWM auto-switching, Power good output	10-pin MSOP, 10-pin 3 × 3 DFN
TC1304	Synchronous Buck Regulator, LDO	2.7 to 5.5	DC/DC: 0.8 to 4.5 LDO: 1.5 to 3.3	−40 to +85	PFM/PWM	2000	65/600	DC/DC: 500 mA LDO: 300 mA	PFM/PWM auto-switching, Power sequencing	10-pin MSOP, 10-pin 3 × 3 DFN
TC1313	Synchronous Buck Regulator, LDO	2.7 to 5.5	DC/DC: 0.8 to 4.5 LDO: 1.5 to 3.3	−40 to +85	PFM/PWM	2000	65/600	DC/DC: 500 mA LDO: 300 mA	PFM/PWM auto-switching	10-pin MSOP, 10-pin 3 × 3 DFN

POWER MANAGEMENT: PWM Controllers

Part #	Description	Input Voltage Range (V)	Operating Temp. Range (°C)	Switching Frequency (kHz)	Typical Active Current (mA)	Features	Packages
MCP1630	Current mode, high-speed PWM to use with PIC® MCUs	3.0 to 5.5	−40 to +125	1000	2.8	UVLO, Short circuit and Overtemperature protection, Integrated MOSFET driver	8-pin MSOP, 8-pin 2 × 3 DFN
MCP1630V	Voltage mode, high-speed PWM to use with PIC MCUs	3.0 to 5.5	−40 to +125	1000	2.8	UVLO, Short circuit and Overtemperature protection, Integrated MOSFET driver	8-pin MSOP, 8-pin 2 × 3 DFN
MCP1631	Current mode, high-speed PWM to use with PIC MCUs	3.0 to 5.5	−40 to +125	2000	3.7	UVLO, Integrated error, Current and voltage sense amplifiers, Overvoltage comparator and MOSFET driver	20-pin SSOP, 20-pin TSSOP, 20-pin 4 × 4 QFN
MCP1631HV	Current mode, high-speed PWM to use with PIC MCUs	3.5 to 16	−40 to +125	2000	3.7	Integrated 16V LDO, UVLO, Integrated error, Current and voltage sense amplifiers, Overvoltage comparator and MOSFET driver	20-pin SSOP, 20-pin TSSOP
MCP1631V	Voltage mode, high-speed PWM to use with PIC MCUs	3.0 to 5.5	−40 to +125	2000	3.7	UVLO, Integrated error, Current and voltage sense amplifiers, Overvoltage comparator and MOSFET driver	20-pin SSOP, 20-pin TSSOP, 20-pin 4 × 4 QFN
MCP1631VHV	Voltage mode, high-speed PWM to use with PIC MCUs	3.5 to 16	−40 to +125	2000	3.7	Integrated 16V LDO, UVLO, Integrated error, Current and voltage sense amplifiers, Overvoltage comparator and MOSFET driver	20-pin SSOP, 20-pin TSSOP
MCP1632	Standalone, Current or Voltage mode high-speed PWM controller with Integrated MOSTFET Driver	3.0 to 5.5	−40 to +125	300/600	5	Adjustable V_{REF} and Soft Start, Internal slope compensation, UVLO, Short circuit and overtemperature protection, Integrated low-side MOSFET driver	8-pin MSOP, 8-pin 2 × 3 DFN
MCP19035	Synchronous Buck PWM Controller with Integrated MOSFET Driver Family	4.5 to 30	−40 to +125	300/600	6	Multiple dead-time options for low-FOM MOSFET compatibility, Integrated current sense capability for short circuit protection, Integrated synchronous MOSFET driver and linear voltage regulator	10-pin 3 × 3 DFN

POWER MANAGEMENT: Hybrid PWM Controllers – Digitally-Enhanced Power Analog

Part #	Input Voltage Range (V)	Output Voltage (V)	Operating Temp. Range (°C)	Topologies Supported	Integrated MCU	Program Memory Size (kWords)	RAM (bytes)	Features	Packages
MCP19110	4.5 to 32	0.5 to 90% * Vin	−40 to +125	Buck	✓	4	256	Synchronous Buck Analog Controller with integrated MCU, LDO and Synchronous MOSFET Drivers. User Configurable/Programmable including MOSFET Dead Time, Switching Frequency, Analog Loop Compensation, and Protection Thresholds	24-pin 4 × 4 QFN
MCP19111	4.5 to 32	0.5 to 90% * Vin	−40 to +125	Buck	✓	4	256	Synchronous Buck Analog Controller with integrated MCU, LDO and Synchronous MOSFET Drivers. User Configurable/Programmable including MOSFET Dead Time, Switching Frequency, Analog Loop Compensation, and Protection Thresholds	28-pin 5 × 5 QFN
MCP19114	4.5 to 42	0.5 to Vin*n (dependent on topology)	−40 to +125	Boost, Flyback, SEPIC, Cuk	✓	4	256	High-Speed Analog-based PWM Controller with integrated MCU, LDO and Synchronous MOSFET Drivers. User Configurable/Programmable including MOSFET Dead Time, Switching Frequency, Analog Loop Compensation, and Protection Thresholds. Also integrated is an I²C™ communication interface	24-pin 4 × 4 QFN
MCP19115	4.25 to 42	0.5 to Vin*n (dependent on topology)	−40 to +125	Boost, Flyback, SEPIC, Cuk	✓	4	256	High-Speed Analog-based PWM Controller with integrated MCU, LDO and Synchronous MOSFET Drivers. User Configurable/Programmable including MOSFET Dead Time, Switching Frequency, Analog Loop Compensation, and Protection Thresholds. Also integrated is an I²C communication interface	28-pin 5 × 5 QFN

POWER MANAGEMENT: Charge Pump DC-to-DC Converters

Part #	Configuration	Input Voltage Range (V)	Output Voltage (V)	Typical Output Current (mA)	Switching Frequency (kHz)	Supply Current (Is, floating output µA, 25°C)	Output Resistance (Ω, at typical output current, 25°C)	Power Conversion Efficiency (%)	Features	Packages
Inverting or Doubling Charge Pumps										
TC682	Inverted doubling	2.4 to 5.5	−2*V_{IN}	10	12	185	140	92% at 2.5 mA	–	8-pin SOIC and 8-pin PDIP
TC1240A	Doubling	2.5 to 5	2*V_{IN}	20	80	550	12	94% at 5 mA	Shutdown	6-pin SOT-23
TC7660S	Inverting or doubling	1.5 to 12	−V_{IN} or 2* V_{IN}	20	10 or 45	80	60	98% at 1 mA	Boost pin increases switching frequency	8-pin SOIC and 8-pin PDIP
TC7660H	Inverting or doubling	1.5 to 10	−V_{IN} or 2* V_{IN}	20	120	1000	55	85% at 10 mA	High voltage oscillator	8-pin SOIC and 8-pin PDIP
TC7662B	Inverting or doubling	1.5 to 15	−V_{IN} or 2* V_{IN}	20	10 or 35	80	65	96% at 1 mA	Boost pin increases switching frequency	8-pin SOIC and 8-pin PDIP
TC7662A	Inverting or doubling	3 to 18	−V_{IN} or 2* V_{IN}	40	12	190	50	97% at 7.5 mA	No low voltage terminal required	8-pin PDIP
TC962	Inverting or doubling	3 to 18	−V_{IN} or 2* V_{IN}	80	12 or 24	190	35	97% at 7.5 mA	Boost pin increases switching frequency	16-pin SOIC, 8-pin PDIP
Regulated Charge Pumps										
MCP1256	Regulated	1.8 to 3.6	3.3	100	650	2300	N/A	85% at 50 mA	Soft start, shutdown, power good signal and sleep mode	10-pin MSOP and 10-pin 3 × 3 DFN
MCP1257	Regulated	1.8 to 3.6	3.3	100	650	2300	N/A	85% at 50 mA	Soft start, shutdown, low battery warning signal, and sleep mode	10-pin MSOP and 10-pin 3 × 3 DFN
MCP1258	Regulated	1.8 to 3.6	3.3	100	650	2300	N/A	85% at 50 mA	Soft start, shutdown, power good signal and bypass mode	10-pin MSOP and 10-pin 3 × 3 DFN
MCP1259	Regulated	1.8 to 3.6	3.3	100	650	2300	N/A	85% at 50 mA	Soft start, shutdown, low battery warning signal, and bypass mode	10-pin MSOP and 10-pin 3 × 3 DFN
MCP1252	Regulated	2.0 to 5.5	3.3, 5.0, or adjustable	150	650	60	N/A	81% at 10 mA	Shutdown, power good, regulated output, adjustable version	8-pin MSOP
MCP1253	Regulated	2.0 to 5.5	3.3, 5.0, or adjustable	150	1000	60	N/A	81% at 10 mA	Shutdown, power good, regulated output, adjustable version	8-pin MSOP

POWER MANAGEMENT: CPU/System Supervisors

Part #	Vcc Range (V)	Operating Temp. Range (°C)	Nominal Reset Voltage (V)	Reset Type	Output	Typical Reset Pulse Width (ms)	Typical Supply Current (µA)	Additional Features	Packages	Bond Options
MCP102	1.0 to 5.5	−40 to +125	4.63, 4.38, 3.08, 2.93, 2.63, 2.32, 1.9	Active-Low	CMOS Push-Pull	120	1		3-pin SOT-23B, 3-pin SC-70, 3-pin TO-92	N/A
MCP103	1.0 to 5.5	−40 to +125	4.63, 4.38, 3.08, 2.93, 2.63, 2.32, 1.9	Active-Low	CMOS Push-Pull	120	1	Max809 Pinout	3-pin SOT-23B, 3-pin SC-70, 3-pin TO-92	N/A
MCP121	1.0 to 5.5	−40 to +125	4.63, 4.38, 3.08, 2.93, 2.63, 2.32, 1.9	Active-Low	Open-Drain	120	1		3-pin SOT-23B, 3-pin SC-70, 3-pin TO-92	N/A
MCP131	1.0 to 5.5	−40 to +125	4.63, 4.38, 3.08, 2.93, 2.63, 2.32, 1.9	Active-Low	Open-Drain	120	1	100 kΩ Internal Pull-up Resistor	3-pin SOT-23B, 3-pin SC-70, 3-pin TO-92	N/A
MCP1316	1.0 to 5.5	−40 to +125	4.6, 2.9[1]	Active-Low	CMOS Push-Pull	200	5	Watchdog Input (WDI), Time-out = 1.6 sec., Manual Reset	5-pin SOT-23	N/A
MCP1317	1.0 to 5.5	−40 to +125	4.6, 2.9[1]	Active-High	CMOS Push-Pull	200	5	Watchdog Input (WDI), Time-out = 1.6 sec., Manual Reset	5-pin SOT-23	N/A
MCP1318	1.0 to 5.5	−40 to +125	4.6, 2.9[1]	Active-Low/High	CMOS Push-Pull	200	5	Watchdog Input (WDI), Time-out = 1.6 sec.	5-pin SOT-23	N/A
MCP1319	1.0 to 5.5	−40 to +125	4.6, 2.9[1]	Active-Low/High	CMOS Push-Pull	200	1	Manual Reset	5-pin SOT-23	N/A
MCP1320	1.0 to 5.5	−40 to +125	4.6, 2.9[1]	Active-Low	Open-Drain	200	5	Watchdog Input (WDI), Time-out = 1.6 sec., Manual Reset	5-pin SOT-23	N/A
MCP1321	1.0 to 5.5	−40 to +125	4.6, 2.9[1]	Active-Low	Open-Drain/ CMOS Push-Pull	200	5	Watchdog Input (WDI), Time-out = 1.6 sec., Manual Reset (Active-Low Open-Drain, Active-High Push-Pull)	5-pin SOT-23	N/A
TC1270A	1.0 to 5.5	−40 to +125	4.63, 4.38, 3.08, 2.93, 2.63	Active-Low	CMOS Push-Pull	280	7	Manual Reset	4-pin SOT-143, 5-pin SOT-23	N/A
TC1271A	1.0 to 5.5	−40 to +125	4.63, 4.38, 3.08, 2.93, 2.63	Active-High	CMOS Push-Pull	280	7	Manual Reset	4-pin SOT-143, 5-pin SOT-23	N/A
TC1270AN	1.0 to 5.5	−40 to +125	4.63, 4.38, 3.08, 2.93, 2.63	Active-Low	Open-Drain	0	7	Manual Reset	4-pin SOT-143, 5-pin SOT-23	N/A
TCM809	1.2 to 5.5	−40 to +85	4.63, 4.38, 4.00, 3.08, 2.93, 2.63, 2.32	Active-Low	CMOS Push-Pull	240	12		3-pin SOT-23B, 3-pin SC-70	N/A
TCM810	1.2 to 5.5	−40 to +85	4.63, 4.38, 4.00, 3.08, 2.93, 2.63, 2.32	Active-High	CMOS Push-Pull	240	12		3-pin SOT-23B, 3-pin SC-70	N/A
MCP100	1.0 to 5.5	−40 to +85	4.72, 4.62, 4.47, 4.37, 3.075, 2.92, 2.62	Active-Low	CMOS Push-Pull	350	45		3-pin TO-92, 3-pin SOT-23B	D, H
MCP809	1.0 to 5.5	−40 to +85	4.72, 4.62, 4.47, 4.37, 3.075, 2.92, 2.62	Active-Low	CMOS Push-Pull	350	45		3-pin SOT-23B	N/A
MCP101	1.0 to 5.5	−40 to +85	4.72, 4.62, 4.47, 4.37, 3.075, 2.92, 2.62	Active-High	CMOS Push-Pull	350	45		3-pin TO-92, 3-pin SOT-23B	D, H
MCP810	1.0 to 5.5	−40 to +85	4.72, 4.62, 4.47, 4.37, 3.075, 2.92, 2.62	Active-High	CMOS Push-Pull	350	45		3-pin SOT-23B	N/A
MCP120	1.0 to 5.5	−40 to +85	4.72, 4.62, 4.47, 4.37, 3.075, 2.92, 2.62	Active-Low	Open-Drain	350	45		3-pin TO-92, 3-pin SOT-23, 8-pin SOIC	D, G, H
MCP130	1.0 to 5.5	−40 to +85	4.72, 4.62, 4.47, 4.37, 3.075, 2.92, 2.62	Active-Low	Open-Drain w/5 kOhm Pull-up	350	45		3-pin TO-92, 3-pin SOT-23, 8-pin SOIC	D, F, H
TC1232	4.5 to 5.5	−40 to +85	4.62, 4.37	Active-Low/ High	Open-Drain	610	50	Watchdog Timer	8-pin PDIP, 8-pin SOIC, 16-pin SOIC	N/A
TC32M	4.5 to 5.5	−40 to +85	4.5	Active-Low	Open-Drain	700	50	Watchdog Timer	3-pin TO-92, 3-pin SOT-223	N/A

Note 1: Other reset voltage options available: 2.0V to 4.7V in 100 mV increments. Contact local Microchip sales office.

POWER MANAGEMENT: Voltage Detectors

Part #	Vcc Range (V)	Operating Temp. Range (°C)	Nominal Reset Voltage (V)	Reset Type	Output	Minimum Reset Pulse Width (ms)	Typical Supply Current (µA)	Features	Packages
MCP111	1.0 to 5.5	−40 to +125	4.63, 4.38, 3.08, 2.93, 2.63, 2.32, 1.90	Active-Low	Open-Drain	–	1		3-pin SOT-23B, 3-pin TO-92, 3-pin SC-70, 3-pin SOT-89
MCP112	1.0 to 5.5	−40 to +125	4.63, 4.38, 3.08, 2.93, 2.63, 2.32, 1.90	Active-Low	CMOS Push-Pull	–	1		3-pin SOT-23B, 3-pin TO-92, 3-pin SC-70, 3-pin SOT-89
TC52	1.5 to 10	−40 to +85	4.5/2.7, 3.0/2.7	Active-Low	Open-Drain	–	2	Dual channel	5-pin SOT-23A

POWER MANAGEMENT: Power MOSFET Drivers

Part #	Drivers	Configuration	Peak Output Current (source/sink, A)	Maximum Supply Voltage (V)	Output Resistance (source/sink, Ω)	Propagation Delay (T_{d1}/T_{d2}, ns)	Rise/Fall Time (T_r/T_f, ns)	Capacitive Load Drive	Features	Packages
Low-Side Power MOSFET Drivers										
MCP1401	Low-Side Single	Inverting	0.5/0.5	18	12/10	35/35	19/15	470 pF in 19 ns	Small footprint	5-pin SOT-23
MCP1402	Low-Side Single	Non-inverting	0.5/0.5	18	12/10	35/35	19/15	470 pF in 19 ns	Small footprint	5-pin SOT-23
TC1410	Low-Side Single	Inverting	0.5/0.5	16	16/16	30/30	25/25	500 pF in 25 ns		8-pin SOIC, 8-pin MSOP, 8-pin PDIP
TC1410N	Low-Side Single	Non-inverting	0.5/0.5	16	16/16	30/30	25/25	500 pF in 25 ns		8-pin SOIC, 8-pin MSOP, 8-pin PDIP
TC1411	Low-Side Single	Inverting	1.0/1.0	16	8/8	30/30	25/25	1000 pF in 25 ns		8-pin SOIC, 8-pin MSOP, 8-pin PDIP
TC1411N	Low-Side Single	Non-inverting	1.0/1.0	16	8/8	30/30	25/25	1000 pF in 25 ns		8-pin SOIC, 8-pin MSOP, 8-pin PDIP
TC1426	Low-Side Dual	Inverting	1.2/1.2	16	12/8	75/75	25/35	1000 pF in 38 ns		8-pin SOIC, 8-pin PDIP
TC1427	Low-Side Dual	Non-inverting	1.2/1.2	16	12/8	75/75	25/35	1000 pF in 38 ns		8-pin SOIC, 8-pin PDIP
TC1428	Low-Side Dual	Complimentary	1.2/1.2	16	12/8	75/75	25/35	1000 pF in 38 ns		8-pin SOIC, 8-pin PDIP
TC4467	Low-Side Quad	Inverting	1.2/1.2	18	10/10	40/40	15/15	470 pF in 15 ns		16-pin SOIC, 14-pin PDIP
TC4468	Low-Side Quad	Non-inverting	1.2/1.2	18	10/10	40/40	15/15	470 pF in 15 ns		16-pin SOIC, 14-pin PDIP
TC4469	Low-Side Quad	Complimentary	1.2/1.2	18	10/10	40/40	15/15	470 pF in 15 ns		16-pin SOIC, 14-pin PDIP
MCP1415	Low-Side Single	Inverting	1.5/1.5	18	6/4	41/48	20/20	470 pF in 13 ns	Small footprint	5-pin SOT-23
MCP1416	Low-Side Single	Non-inverting	1.5/1.5	18	6/4	41/48	20/20	470 pF in 13 ns	Small footprint	5-pin SOT-23
TC4426A	Low-Side Dual	Inverting	1.5/1.5	18	7/7	30/30	25/25	1000 pF in 25 ns		8-pin SOIC, 8-pin MSOP, 8-pin PDIP, 8-pin 6 × 5 DFN-S
TC4427A	Low-Side Dual	Non-inverting	1.5/1.5	18	7/7	30/30	25/25	1000 pF in 25 ns		8-pin SOIC, 8-pin MSOP, 8-pin PDIP, 8-pin 6 × 5 DFN-S
TC4428A	Low-Side Dual	Complimentary	1.5/1.5	18	7/7	30/30	25/25	1000 pF in 25 ns		8-pin SOIC, 8-pin MSOP, 8-pin PDIP, 8-pin 6 × 5 DFN-S
TC4404	Low-Side Single	Inverting	1.5/1.5	18	7/7	40/60	40/40	1000 pF in 30 ns		8-pin SOIC, 8-pin PDIP
TC4405	Low-Side Single	Non-inverting	1.5/1.5	18	7/7	40/60	40/40	1000 pF in 30 ns		8-pin SOIC, 8-pin PDIP
TC4626	Low-Side Single	Inverting	1.5/1.5	6	10/8	35/45	33/27	1000 pF in 40 ns	Boosted drive voltage	16-pin SOIC, 8-pin PDIP
TC4627	Low-Side Single	Non-inverting	1.5/1.5	6	10/8	35/45	33/27	1000 pF in 40 ns	Boosted drive voltage	16-pin SOIC, 8-pin PDIP
MCP14E6	Low-Side Dual	Inverting	2.0/2.0	18	5/5	45/45	12/15	1000 pF in 15 ns	Enable pin	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MCP14E7	Low-Side Dual	Non-inverting	2.0/2.0	18	5/5	45/45	12/15	1000 pF in 15 ns	Enable pin	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MCP14E8	Low-Side Dual	Complimentary	2.0/2.0	18	5/5	45/45	12/15	1000 pF in 15 ns	Enable pin	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
TC1412	Low-Side Single	Inverting	2.0/2.0	16	4/4	35/35	18/18	1000 pF in 18 ns		8-pin SOIC, 8-pin MSOP, 8-pin PDIP
TC1412N	Low-Side Single	Non-inverting	2.0/2.0	16	4/4	35/35	18/18	1000 pF in 18 ns		8-pin SOIC, 8-pin MSOP, 8-pin PDIP
TC4423A	Low-Side Dual	Inverting	3.0/3.0	18	2.2/2.8	40/41	12/12	1800 pF in 12 ns		8-pin SOIC, 16-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
TC4424A	Low-Side Dual	Non-inverting	3.0/3.0	18	2.2/2.8	40/41	12/12	1800 pF in 12 ns		8-pin SOIC, 16-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
TC4425A	Low-Side Dual	Complimentary	3.0/3.0	18	2.2/2.8	40/41	12/12	1800 pF in 12 ns		8-pin SOIC, 16-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MCP14E9	Low-Side Dual	Inverting	3.0/3.0	18	4/4	45/45	14/17	1800 pF in 17 ns	Enable pin	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MCP14E10	Low-Side Dual	Non-inverting	3.0/3.0	18	4/4	45/45	14/17	1800 pF in 17 ns	Enable pin	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MCP14E11	Low-Side Dual	Complimentary	3.0/3.0	18	4/4	45/45	14/17	1800 pF in 17 ns	Enable pin	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
TC1413	Low-Side Single	Inverting	3.0/3.0	16	2.7/2.7	35/35	20/20	1800 pF in 20 ns		8-pin SOIC, 8-pin MSOP, 8-pin PDIP
TC1413N	Low-Side Single	Non-inverting	3.0/3.0	16	2.7/2.7	35/35	20/20	1800 pF in 20 ns		8-pin SOIC, 8-pin MSOP, 8-pin PDIP
MCP14E3	Low-Side Dual	Inverting	4.0/4.0	18	2.5/2.5	46/50	15/18	2200 pF in 15 ns	Enable pin	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MCP14E4	Low-Side Dual	Non-inverting	4.0/4.0	18	2.5/2.5	46/50	15/18	2200 pF in 15 ns	Enable pin	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MCP14E5	Low-Side Dual	Complimentary	4.0/4.0	18	2.5/2.5	46/50	15/18	2200 pF in 15 ns	Enable pin	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MCP1403	Low-Side Dual	Inverting	4.5/4.5	18	2.2/2.8	40/40	15/18	2200 pF in 15 ns		8-pin SOIC, 16-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MCP1404	Low-Side Dual	Non-inverting	4.5/4.5	18	2.2/2.8	40/40	15/18	2200 pF in 15 ns		8-pin SOIC, 16-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MCP1405	Low-Side Dual	Complimentary	4.5/4.5	18	2.2/2.8	40/40	15/18	2200 pF in 15 ns		8-pin SOIC, 16-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MCP1406	Low-Side Single	Inverting	6.0/6.0	18	2.1/1.5	40/40	20/20	2500 pF in 20 ns		8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN

POWER MANAGEMENT: Power MOSFET Drivers (Continued)

Part #	Drivers	Configuration	Peak Output Current (source/sink, A)	Maximum Supply Voltage (V)	Output Resistance (source/sink, Ω)	Propagation Delay (T_{d1}/T_{d2}, ns)	Rise/Fall Time (T_r/ T_f, ns)	Capacitive Load Drive	Features	Packages
Low-Side Power MOSFET Drivers (Continued)										
MCP1407	Low-Side Single	Non-inverting	6.0/6.0	18	2.1/1.5	40/40	20/20	2500 pF in 20 ns		8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
TC4421A	Low-Side Single	Inverting	9.0/9.0	18	1.25/0.8	38/42	28/26	4700 pF in 15 ns		8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
TC4422A	Low-Side Single	Non-inverting	9.0 / 9.0	18	1.25 / 0.8	38 / 42	28 / 26	4700 pF in 15 ns		8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
TC4451	Low-Side Single	Inverting	12.0/12.0	18	1.0/0.9	44/44	30/32	10,000 pF in 21 ns		8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
TC4452	Low Side Single	Non-inverting	12.0/12.0	18	1.0/0.9	44/44	30/32	10,000 pF in 21 ns		8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
High-Side and Synchronous Drivers										
TC4431	High-Side Single	Inverting	3.0/1.5	30	7/7	62/78	25/33	1000 pF in 15 ns	30V, high-side driver	8-pin SOIC, 8-pin PDIP
TC4432	High-Side Single	Non-inverting	3.0/1.5	30	7/7	62/78	25/33	1000 pF in 15 ns	30V, high-side driver	8-pin SOIC, 8-pin PDIP
TC4403	Floating Load Driver	Non-inverting	1.5/1.5	18	2.8/3.5	33/38	23/25	1800 pF in 25 ns	Floating load driver	8-pin PDIP
MCP14628	Sync. Buck Dual	Synchronous Buck (high/low)	2.0/2/0 (3.5 low side)	5.5 (36V boot pin)	1/1 (0.5 on low side)	15–22	10/10	3300 pF in 10 ns	Continuous or discontinuous operation	8-pin SOIC, 8-pin 3 × 3 DFN
MCP14700	Sync. Buck Dual	Synchronous Buck (high/low)	2.0/2/0 (3.5 low side)	5.5 (36V boot pin)	1/1 (0.5 on low side)	15–22	10/10	3300 pF in 10 ns	Allows external dead time control	8-pin SOIC, 8-pin 3 × 3 DFN

POWER MANAGEMENT: Power MOSFETs

Part #	Vds (V)	Configuration	Polarity	Rds (on) @ 4.5V (mΩ, Max.)	Rds (on) @ 10V (mΩ, Max.)	Qg @ 4.5V (nC, Max.)	Id (A, Max. @ 25°C, Tcase)	Vgs (th) (V, Min.)	Qgd (nC, Typ.)	Rg (Ω, Typ.)	Packages
MCP87018	25	Single	N	2.2	1.9	37	100	1	13	1.5	8-pin 5 × 6 PDFN
MCP87022	25	Single	N	2.6	2.3	29	100	1	9	1.3	8-pin 5 × 6 PDFN
MCP87030	25	Single	N	4	3.5	22	100	1	6.7	1.2	8-pin 5 × 6 PDFN
MCP87050	25	Single	N	6	5	15	100	1	4.7	1.1	8-pin 5 × 6 PDFN
MCP87055	25	Single	N	7	6	14	60	1	4.5	2.1	8-pin 3.3 × 3.3 PDFN
MCP87090	25	Single	N	12	10.5	10	64	1.1	2.8	1.8	8-pin 5 × 6 PDFN, 8-pin 3.3 × 3.3 PDFN
MCP87130	25	Single	N	16.5	13.5	8	54	1.1	2.6	1.7	8-pin 5 × 6 PDFN, 8-pin 3.3 × 3.3 PDFN

POWER MANAGEMENT: Battery Chargers

Part #	Mode	Cell Type	# of Cells	Vcc Range (V)	Cell Voltage (V)	Maximum Charging Current (mA)	Max. Voltage Regulation (%)	Int/Ext FET	Features	Packages
MCP73113	Linear	Li-ion/Li-Polymer	1	4 to 16	4.1, 4.2, 4.35, 4.4	1100	±0.5	Int	6.5V Overvoltage Protection	10-pin 3 × 3 DFN
MCP73114	Linear	Li-ion/Li-Polymer	1	4 to 16	4.1, 4.2, 4.35, 4.4	1100	±0.5	Int	5.8V Overvoltage Protection	10-pin 3 × 3 DFN
MCP73123	Linear	LiFePO4	1	4 to 16	3.6	1100	±0.5	Int	6.5V Overvoltage Protection, LiFePO4 charging	10-pin 3 × 3 DFN
MCP73213	Linear	Li-ion/Li-Polymer	2	4 to 16	8.2, 8.4, 8.7, 8.8	1100	±0.6	Int	13V Overvoltage Protection	10-pin 3 × 3 DFN
MCP73223	Linear	LiFePO4	2	4 to 16	7.2	1100	±0.6	Int	13V Overvoltage Protection, LiFePO4 charging	10-pin 3 × 3 DFN
MCP73826	Linear	Li-Ion/Li-Polymer	1	4.5 to 5.5	4.1, 4.2	N/A	±1.0	Ext	Small size, charge current set by external FET	6-pin SOT-23
MCP73827	Linear	Li-Ion/Li-Polymer	1	4.5 to 5.5	4.1, 4.2	N/A	±1.0	Ext	Mode indicator, Charge current monitor, Charge current set by external FET	8-pin MSOP
MCP73828	Linear	Li-Ion/Li Polymer	1	4.5 to 5.5	4.1, 4.2	N/A	±1.0	Ext	Temperature monitor, Charge current set by external FET	8-pin MSOP
MCP73841	Linear	Li-Ion/Li-Polymer	1	4.5 to 12	4.1, 4.2	N/A	±0.5	Ext	Safety charge timers, Temperature monitor, Charge current set by external FET	10-pin MSOP
MCP73841	Linear	Li-Ion/Li-Polymer	1	4.5 to 12	4.1, 4.2	N/A	±0.5	Ext	Safety charge timers, Temperature monitor, Charge current set by external FET	10-pin MSOP
MCP73842	Linear	Li-Ion/Li-Polymer	2	8.7 to 12	8.2, 8.4	N/A	±0.5	Ext	Safety charge timers, Temperature monitor, Charge current set by external FET	10-pin MSOP
MCP73843	Linear	Li-Ion/Li-Polymer	1	4.5 to 12	4.1, 4.2	N/A	±0.5	Ext	Safety charge timers, Charge current set by external FET	8-pin MSOP
MCP73844	Linear	Li-Ion/Li-Polymer	2	8.7 to 12	8.2, 8.4	N/A	±0.5	Ext	Safety charge timers, Charge current set by external FET	8-pin MSOP
MCP73811	Linear	Li-Ion/Li-Polymer	1	3.7 to 6.0	4.2	500	±1.0	Int	Selectable charge current (100 mA, 500 mA), Charge enable input	5-pin SOT-23

POWER MANAGEMENT: Battery Chargers (Continued)

Part #	Mode	Cell Type	# of Cells	Vcc Range (V)	Cell Voltage (V)	Maximum Charging Current (mA)	Max. Voltage Regulation (%)	Int/Ext FET	Features	Packages
MCP73812	Linear	Li-Ion/Li Polymer	1	3.7 to 6.0	4.2	500	±1.0	Int	Programmable charge current (100 mA, 500 mA), Charge enable input	5-pin SOT-23
MCP73830/L	Linear	Li-Ion/Li-Polymer	1	3.75 to 6.0	4.2	1000/200	±0.75	Int	Soft-start, Charge enable pin	6-pin 2 × 2 TDFN
MCP73831	Linear	Li-Ion/Li-Polymer	1	3.7 to 6.0	4.2, 4.35, 4.4, 4.5	500	±0.75	Int	UVLO, Thermal regulation, Programmable charge current, Tri-state STAT pin	5-pin SOT-23, 8-pin 2 × 3 DFN
MCP73832	Linear	Li-Ion/Li-Polymer	1	3.7 to 6.0	4.2, 4.35, 4.4, 4.5	500	±0.75	Int	UVLO, Thermal regulation, Programmable charge current, Open-drain STAT pin	5-pin SOT-23, 8-pin 2 × 3 DFN
MCP73853	Linear	Li-Ion/Li-Polymer	1	4.5 to 5.5	4.1, 4.2	500	±0.5	Int	USB control, Safety charge timers, Temperature monitor, Thermal regulation	16-pin 4 × 4 QFN
MCP73855	Linear	Li-Ion/Li-Polymer	1	4.5 to 5.5	4.1, 4.2	500	±0.5	Int	USB control, Safety charge timers, Thermal regulation	10-pin 3 × 3 DFN
MCP73833	Linear	Li-Ion/Li-Polymer	1	3.7 to 6.0	4.2, 4.35, 4.4, 4.5	1000	±0.75	Int	UVLO, Thermal regulation, Thermistor input, LDO Test mode, Multiple Vreg outputs, Safety timer, Power good output	10-pin 3 × 3 DFN, 10-pin MSOP
MCP73834	Linear	Li-Ion/Li-Polymer	1	3.7 to 6.0	4.2, 4.35, 4.4, 4.5	1000	±0.75	Int	UVLO, Thermal regulation, Thermistor input, LDO Test mode, Multiple Vreg outputs, Safety timer, Timer enable input	10-pin 3 × 3 DFN, 10-pin MSOP
MCP73837	Linear	Li-Ion/Li-Polymer	1	3.7 to 6.0	4.2, 4.35, 4.4, 4.5	1000	±0.75	Int	Dual input (USB, DC input from adapter) auto-switching, UVLO, Thermal regulation, Thermistor input, Power good output	10-pin 3 × 3 DFN, 10-pin MSOP
MCP73838	Linear	Li-Ion/Li Polymer	1	3.7 to 6.0	4.2, 4.35, 4.4, 4.5	1000	±0.75	Int	Dual input (USB, DC input from adapter) auto-switching, UVLO, Thermal regulation, Timer enable input	10-pin 3 × 3 DFN, 10-pin MSOP
MCP73871	Linear	Li-Ion/Li-Polymer	1	3.75 to 6.0	4.1, 4.2, 4.35, 4.4	1500 (A/C Adapter) 500 (USB)	±0.5	Int	Simultaneous charging of load and battery, Load-dependent charging, Multiple programmable charge currents	20-pin 4 × 4 QFN, 20-pin SSOP

POWER MANAGEMENT: Hot Swap Controllers

Part #	Number of Outputs	Vpos to Vneg Differential Voltage (V)	Junction Temperature Range (°C)	OVLO	UVLO	Power good	Int/Ext FET	Applications	Packages
MCP18480	1	−0.3 to +15.0	−40 to +85	Adjustable	Adjustable	Adjustable	Ext	−48V Telecom/Datacom, Bus/Backplane	20-pin SSOP

POWER MANAGEMENT: Electroluminescent Backlight Drivers

Part #	Input Voltage Low (V)	Input Voltage High (V)	Nominal Output Voltage (V)	Switch Resistance (Max Ω)	Output Regulation	Lamp Size per Device (Max in²)	Packages
Single Lamp Drivers							
HV816 [3]	2.7	5.5	±180	-	Yes	42	QFN-16
HV823	2.0	9.5	±90	6.0	Yes	23	SOIC-8
HV825	1.0	1.6	±56	15	No	3.0	SOIC-8, MSOP-8
HV830	2.0	9.5	±100	4.0	Yes	25	SOIC-8
HV833	1.8	6.5	±90	4.0	Yes	12	MSOP-8
HV857L	1.8	5.0	±95	6.0	Yes	5.0	DFN-8, MSOP-8
HV857	1.8	5.0	±95	6.0	Yes	5.0	DFN-8, MSOP-8
HV859	1.8	5.0	±105	6.0	Yes	5.0	DFN-8, MSOP-8
HV860	2.5	4.5	±110	6.0	Yes	5.0	QFN-12
Dual Lamp Drivers							
HV839 [1]	2.0	5.8	±90	6.0	Yes	3.5	DFN-10, MSOP-10
HV841 [1]	2.0	5.8	±100	6.0	Yes	3.5	DFN-10, MSOP-10
HV843 [1]	2.0	5.8	±90	10.0	Yes	3.5	DFN-10
HV845	2.0	5.8	±90	10.0	Yes	3.5	QFN-12
HV861	2.5	4.5	±90	7.0	Yes	5.0	QFN-16

Note 1: For new cell phone designs use HV801.
Note 2: Up to 3.0 in² in any combination.
Note 3: The boost converter switching FET is external to the device, so its resistance will vary depending upon the application circuit.

POWER MANAGEMENT: Electroluminescent Backlight Drivers (Continued)

Part #	Input Voltage Low (V)	Input Voltage High (V)	Nominal Output Voltage (V)	Switch Resistance (Max Ω)	Output Regulation	Lamp Size per Device (Max in²)	Packages
Tri-Lamp Drivers							
HV856[2]	1.8	6.5	±105	6.0	Yes	3.0	DFN-10
HV858[2]	1.8	6.5	±95	6.0	Yes	3.0	DFN-10, MSOP-10
16-Segment Drivers							
HV509	2.0	5.5	±200	N/A	N/A	6.5	QFN-32
HV528	1.7	5.5	±200	N/A	N/A	6.5	QFN-32
HV881[3]	1.8	5.5	±170	N/A	Yes	4.6	QFN-32
Single Inductorless Lamp Drivers							
HV850	3.0	4.2	±70	–	Yes	1.5	MSOP-8
HV852	2.4	5.0	±80	–	Yes	1.5	MSOP-8, DFN-10
HV853	3.2	5.0	±80	–	Yes	1.5	MSOP-8, DFN-10
Offline Driver							
HV809	50	200	±200	–	N/A	100	SOIC-8, SOIC-8 w/ heat slug, TO-220-7

Note 1: For new cell phone designs use HV801.
Note 2: Up to 3.0 in² in any combination.
Note 3: The boost converter switching FET is external to the device, so its resistance will vary depending upon the application circuit.

POWER MANAGEMENT: High-Voltage Driver/Interface ICs

Part #	Output Channels	Direction	Logic Configuration	Output Operating Voltage (V)	Output Current per Channel (mA)	Packages
Sink Only Outputs: Open Drain N-Channel						
HV5122	32	CCW	Serial to parallel converter with output enable and strobe	225	100	44-Lead PQFP, 44-Lead PLCC
HV5222	32	CW	Serial to parallel converter with output enable and strobe	225	100	44-Lead PQFP, 44-Lead PLCC
HV5522	32	CCW	Serial to parallel converter with latches, polarity, and blanking	220	100	44-Lead PQFP, 44-Lead PLCC
HV5523	32	CCW	Serial to parallel converter with latches, polarity, and blanking	220	100	44-Lead QFN
HV5530	32	CCW	Serial to parallel converter with latches, polarity, and blanking	300	100	44-Lead PQFP, 44-Lead PLCC
HV5622	32	CW	Serial to parallel converter with latches, polarity, and blanking	220	100	44-Lead PQFP, 44-Lead PLCC
HV5623	32	CW	Serial to parallel converter with latches, polarity, and blanking	220	100	44-Lead QFN
HV5630	32	CW	Serial to parallel converter with latches, polarity, and blanking	300	100	44-Lead PLCC
Source Only Outputs: Open Drain P-Channel						
HV4522	32	CCW	Serial to parallel converter with latches, polarity, and blanking	−220	−60	44-Lead PLCC
HV4622	32	CW	Serial to parallel converter with latches, polarity, and blanking	−220	−60	44-Lead PLCC
HV57009	64	B	Current controlled driver with latches and blanking, two 32-bit shift registers	−85	Controllable to −2	80-Lead PQFP

POWER MANAGEMENT: High-Voltage Driver/Interface ICs (Continued)

Part #	Output Channels	Direction	Logic Configuration	Output Operating Voltage (V)	Output Current per Channel (mA)	Output Structure	Clock Rate (Max MHz)	Bits	Outputs On	Packages
Source-Sink Outputs: Push-Pull										
HV3418	64	Both	Serial to parallel converter with latches, polarity, and blanking	+180	±5.0	Push-Pull	6	1	All	80-Lead PQFP
HV507	64	Both	Serial to parallel converter with latches, polarity, and blanking	+300	±1.0	Push-Pull	8	1	All	80-Lead PQFP
HV508	2	–	H-Bridge output with two output voltage level selections and polarity	+45	+225 −270	Push-Pull, H-Bridge	–	–	–	8-Lead SOIC
HV513	8	CW	Serial to parallel converter with latches, polarity, and blanking HI-Z and short circuit detect	+250	±20	Push-Pull	8	1	All	24-Lead SOW, 32-Lead QFN

POWER MANAGEMENT: High-Voltage Driver/Interface ICs (Continued)

Part #	Output Channels	Direction	Logic Configuration	Output Operating Voltage (V)	Output Current per Channel (mA)	Output Structure	Clock Rate (Max MHz)	Bits	Outputs On	Packages
Source-Sink Outputs: Push-Pull (Continued)										
HV514	8	CW	Serial to parallel converter with data latches, channel polarity select, and blanking	+250	±20	Push-Pull	8	1	All	24-Lead SOW
HV518	32	CW	Serial to parallel converter with latches, enable, and strobe	+80	+1.0 −25	Push-Pull	6	1	All	40-Lead DIP, 44-Lead PLCC
HV5308B	32	CW	Serial to parallel converter with latches, and output enable	+80	±20	Push-Pull	8	1	All	44-Lead PQFP, 44-Lead PLCC
HV5408B	32	CCW	Serial to parallel converter with latches, and output enable	+80	±20	Push-Pull	8	1	All	44-Lead PQFP. 44-Lead PLCC
HV574	80	Both	Serial to parallel converter with latches, polarity, and blanking	+80	+15 −30	Push-Pull	25	4	All	100-Lead PQFP
HV57708	64	Both	EL driver with latches, polarity, and blanking with four 16-bit shift registers	+80	+12 −15	Push-Pull	6	4	All	80-Lead PQFP
HV57908	64	Both	EL or plasma driver w/latches, blanking, polarity, and single shift register	+80	+12 −15	Push-Pull	8	1	All	80-Lead PQFP
HV5812	20	CW	Serial to parallel converter with latches, blanking and strobe	+80	+1.0 −25	Push-Pull	5	1	All	28-Lead DIP, 28-Lead PLCC, 28-Lead SOW
HV583	128	Both	Serial to parallel converter with latches, enable, and blanking	+80	±20	Push-Pull	40	1	All	Die only
HV632	32	Both	Serial to parallel converter with latches, polarity, and blanking	+80	±4.0	Gray Shade PWM	10	8	All	64-Lead PQFP
HV633	32	Both	Amplitude modulated gray shade column driver with 128 output levels	+80	±7.0	Gray Shade Level	12	7	All	64-Lead PQFP
HV66	32	CW	Serial to parallel converter with latches, polarity, and blanking HI-Z and short circuit detect	+60	±5.0	Push-Pull	5	1	All	44-Lead PQFP, 44-Lead PLCC
HV6810	10	Both	Serial to parallel converter with data latches, channel polarity select, and blanking	+80	+25	Push-Pull	5	1	All	20-Lead PLCC, 20-Lead SOW
HV7022C	34	Both	Serial to parallel converter with latches, enable, and strobe	+230	±70 (min)	Push-Pull	4	1	One	44-Lead PLCC
HV7224	40	CW	Serial to parallel converter with latches, and output enable	+240	±70 (min)	Push-Pull	3	1	One	64-Lead PQFP
HV7620	32	Both	Serial to parallel converter with latches, and output enable	+200	±50 (min)	Push-Pull	10	4	All	64-Lead PQFP
HV9308	32	CW	EL or plasma panel driver with latches and output enable	+80	+5.0 −20	Push-Pull	8	1	All	44-Lead PLCC
HV9408	32	CCW	EL or plasma panel driver with latches and output enable	+80	+5.0 −20	Push-Pull	8	1	All	44-Lead PLCC
HV9708	32	CW	EL or plasma panel driver with latches, polarity and blanking	+80	+5.0 −20	Push-Pull	8	1	All	44-Lead PLCC
HV9808	32	CCW	EL or plasma panel driver with latches, polarity and blanking	+80	+5.0 −20	Push-Pull	8	1	All	44-Lead PLCC

POWER MANAGEMENT: LED Drivers

Part #	Application	Topology	Input Voltage (V)	Ouput Current	Dimming	Packages
Automotive (AEC-Q100 Certified) LED Drivers						
AT9917	Auto	Boost, Sepic	5.3–40	External FET	PWM/Linear	TSSOP-24
AT9919	Auto	Buck	4.5–40	External FET	PWM	DFN-8
AT9932	Auto	Boost-Buck (Ćuk)	5.3–40	External FET	PWM/Linear	TSSOP-24
AT9933	Auto	Boost-Buck (Ćuk)	9.0–75	External FET	PWM	SOIC-8
General Purpose LED Drivers						
HV9801A	AC/DC	Buck	15–450	External FET	4-Level Switch	SOIC-8, SOIC-16
HV9861A	AC/DC, DC/DC	Buck	12–450	External FET	PWM/Linear	SOIC-8, SOIC-16
HV9910B	AC/DC, DC/DC	Buck	8.0–450	External FET	PWM/Linear	SOIC-8, SOIC-16
HV9910C	AC/DC, DC/DC	Buck	15–450	External FET	PWM/Linear	SOIC-8, SOIC-16, SOIC-8 w/Heat Slug
HV9918	DC/DC	Buck	4.5–40	Integrated FET	PWM	DFN-8

POWER MANAGEMENT: LED Drivers (Continued)

Part #	Application	Topology	Input Voltage (V)	Ouput Current	Dimming	Packages
General Purpose LED Drivers (Continued)						
HV9919B	DC/DC	Buck	4.5–40	External FET	PWM	DFN-8
HV9921	AC/DC	Buck	20–400	20 mA	No	TO-92-3, SOT-89-3
HV9922	AC/DC	Buck	20–400	50 mA	No	TO-92-3, SOT-89-3
HV9923	AC/DC	Buck	20–400	30 mA	No	TO-92-3, SOT-89-3
HV9925	AC/DC	Buck	20–400	20–50 mA	PWM	SOIC-8 w/Heat Slug
HV9930	DC/DC	Hysteric	8.0–200	External FET	PWM	SOIC-8
HV9931	AC/DC	Single-switch PFC	8.0–450	External FET	PWM	SOIC-8
HV9961	AC/DC, DC/DC	Buck	8.0–450	External FET	PWM/Linear	SOIC-8, SOIC-16
HV9967B	DC/DC	Buck	8.0–60	Integrated FET	PWM/Linear	DFN-8, MSOP-8
Backlight LED Drivers						
HV9803	DC/DC	Buck	7.0–13.2	External FET	PWM/Linear	SOIC-8
HV9803B	DC/DC	Buck	7.0–16.0	External FET	PWM/Linear	SOIC-8
HV9861A	DC/DC	Buck	15–450	External FET	PWM/Linear	SOIC-8, SOIC-16
HV9911	DC/DC	Boost, Sepic, Buck-Boost	9.0–250	External FET	PWM	SOIC-16
HV9912	DC/DC	Boost, Sepic, Buck-Boost	9.0–100	External FET	PWM	SOIC-16
HV9961	DC/DC	Buck	8.0–450	External FET	PWM/Linear	SOIC-8, SOIC-16
HV9963	DC/DC	Boost, Sepic, Buck-Boost	8.0–40	External FET	PWM/Linear	SOIC-16
HV9967B	DC/DC	Buck	8.0–60	Integrated FET	PWM/Linear	DFN-8, MSOP-8
HV9980	DC/DC	Buck	100–160	70 mA	PWM/Linear	SOW-24
HV9982	DC/DC	Boost, SEPIC	10–40	External FET	PWM/Linear	QFN-40
HV9989	DC/DC	Boost, SEPIC	10–40	External FET	PWM/Linear	QFN-40

POWER MANAGEMENT: LED Drivers (Continued)

Part #	V$_{IN}$ (V)	V$_{OUT}$ (V)	Ouput Current (mA)	Dimming	Parallelable	Packages	Features
Linear Regulators							
CL2	5.0–90	5.0–90	20	External FET	Yes	TO-252-3, TO-92-3, SOT-89-3	–
CL25	5.0–90	5.0–90	25	External FET	Yes	TO-92-3, SOT-89-3	–
CL220	5.0–220	5.0–220	20	External FET	Yes	TO-252-3, TO-220-3	–
CL320	6.5–90	4.0–90	20	PWM	Yes	SOIC-8 w/Heat Slug	OTP, separate ENABLE pin
CL325	6.5–90	4.0–90	25	PWM	Yes	SOIC-8 w/Heat Slug	OTP, separate ENABLE pin
CL330	6.5–90	4.0–90	30	PWM	Yes	SOIC-8 w/Heat Slug	OTP, separate ENABLE pin
CL520	4.75–90	1.0–90	20	–	Yes	TO-252-3, TO-92-3	–
CL525	4.75–90	1.0–90	25	–	Yes	TO-252-3, TO-92-3	–
CL6	6.5–90	4.0–90	100	No	Yes	TO-252-3, TO-220-3	Reverse polarity protection, OTP
CL7	6.5–90	4.0–90	100	PWM	Yes	SOIC-8 w/Heat Slug	Reverse polarity protection, OTP

POWER MANAGEMENT: LED Drivers (Continued)

Part #	V_{IN} (VAC)	V_{OUT} (V)	Ouput Current (peak mA)	Dimming	Parallelable	Packages		Features
Sequential Linear LED Drivers								
CL8800	90–275	70–350	115	External Dimmer	Yes	QFN-33		6-Stage
CL8801	90–275	70–350	200	External Dimmer	Yes	QFN-33		4-Stage

POWER MANAGEMENT: MOSFETs

Part #	BV_{DSX} min (V)	$R_{DS(ON)}$ max (Ω)	$V_{GS(OFF)}$ min (V)	$V_{GS(OFF)}$ max (V)	I_{DSS} @ V_{GS} = 0V		Packages
					min (mA)	max (mA)	
Depletion Mode MOSFETs							
DN1509	90	6.0	−1.8	−3.5	300	–	SOT-23, SOT-89
DN2450	500	10	−1.5	−3.5	700	–	TO-252, SOT-89
DN2470	700	42	−1.5	−3.5	500 (typ)	–	TO-252
DN2530	300	12	−1.0	−3.5	200	–	TO-92, SOT-89
DN2535	350	25	−1.5	−3.5	150	–	TO-92, TO-220
DN2540	400	25	−1.5	−3.5	150	–	TO-92, TO-220, SOT-89
DN2625	250	3.5	−1.5	−2.1	3300	–	TO-252, SOIC-8
DN3135	350	35	−1.5	−3.5	180	–	SOT-23, SOT-89
DN3145	450	60	−1.5	−3.5	120	–	SOT-89
DN3525	250	6.0	−1.5	−3.5	300	–	SOT-89
DN3535	350	10	−1.5	−3.5	200	–	SOT-89
DN3545	450	20	−1.5	−3.5	200	–	TO-92, SOT-89
DN3765	650	8.0	−1.5	−3.5	200	–	TO-252
LND01	9.0	1.4	−0.8	−3.0	300	–	SOT-23
LND150	500	1000	−1.0	−3.0	1.0	3.0	SOT-23, TO-92, SOT-89

POWER MANAGEMENT: MOSFETs (Continued)

Part #	BV_{DSS} min (V)	$R_{DS(ON)}$ max (Ω)	$I_{D(ON)}$ min (A)	C_{ISS} max (pF)	$V_{GS(TH)}$ max (V)	Packages
N-Channel Enhancement Mode MOSFETs						
2N6660	60	3.0	1.5	50	2.0	TO-39
2N6661	90	4.0	1.5	50	2.0	TO-39
2N7000	60	5.0	0.075	60	3.0	TO-92
2N7002	60	7.5	0.5	50	2.5	SOT-23
2N7008	60	7.5	0.5	50	2.5	TO-92
LN100	1200	3000	0.003	50	1.6	LFGA-6
TN0104	40	1.8, 2.0	2.0	70	1.6	TO-92, SOT-89
TN0106	60	3.0	2.0	60	2.0	TO-92
TN0110	100	3.0	2.0	60	2.0	TO-92
TN0604	40	0.75	4.0	190	1.6	TO-92, SOW-20
TN0606	60	1.5	3.0	150	2.0	TO-92
TN0610	100	1.5	3.0	150	2.0	TO-92
TN0620	200	6.0	1.0	150	1.6	TO-92
TN0702	20	1.3	0.5	200	1.0	TO-92
TN2106	60	2.5	0.6	50	2.0	SOT-23, TO-92
TN2124	240	15	0.14	50	2.0	SOT-23

POWER MANAGEMENT: MOSFETs (Continued)

Part #	BV$_{DSS}$ min (V)	R$_{DS(ON)}$ max (Ω)	I$_{D(ON)}$ min (A)	C$_{ISS}$ max (pF)	V$_{GS(TH)}$ max (V)	Packages
N-Channel Enhancement Mode MOSFETs (Continued)						
TN2130	300	25	0.25	50	2.4	SOT-23
TN2425	250	3.5	1.5	200	2.0	SOT-89
TN2435	350	6.0	1.0	200	0.8 (min)	SOT-89
TN2501	18	2.5	0.25	110	1.0	SOT-89
TN2504	40	1.0	4.0	125	1.6	SOT-89
TN2510	100	1.5	3.0	125	2.0	SOT-89
TN2524	240	6.0	1.0	125	2.0	SOT-89
TN2529	290	6.0	1.0	125	2.0	QFN-14
TN2535	350	10	1.0	125	2.0	SOT-89
TN2540	400	12	1.0	125	2.0	TO-92, SOT-89
TN2640	400	5.0	2.0	225	2.0	TO-252 D-PAK, SOIC-8, TO-92
TN5325	250	7.0	1.2	110	2.0	SOT-23, TO-92, SOT-89
TN5335	350	15	0.75	110	2.0	SOT-23, SOT-89
VN0104	40	3.0	2.0	65	2.4	TO-92
VN0106	60	3.0	2.0	65	2.4	TO-92
VN0109	90	3.0	2.0	65	2.4	TO-92
VN0300	30	1.2	1.0	190	2.5	TO-92
VN0550	500	60	0.15	55	4.0	TO-92
VN0606	60	3.0	1.5	50	2.0	TO-92
VN0808	80	4.0	1.5	50	2.0	TO-92
VN10K	60	5.0	0.75	60	2.5	TO-92
VN1206	120	6.0	1.0	125	2.0	TO-92
VN2106	60	4.0	0.6	50	2.4	TO-92
VN2110	100	4.0	0.6	50	2.4	SOT-23
VN2210	100	0.35	8.0	500	2.4	TO-39, TO-92
VN2222LL	60	7.5	0.75	60	2.5	TO-92
VN2224	240	1.25	5.0	350	3.0	TO-92
VN2406	240	6.0	1.0	125	2.0	TO-92
VN2410	240	10	1.0	125	2.0	TO-92
VN2450	500	13	0.5	150	4.0	TO-92, SOT-89
VN2460	600	20	0.25	150	4.0	TO-92, SOT-89
VN3205	50	0.3	3.0	300	2.4	TO-92, SOT-89, DIP-14
VN3515	350	15	0.15	110	1.8	TO-92
VN4012	400	12	0.15	110	1.8	TO-92

POWER MANAGEMENT: MOSFETs (Continued)

Part #	BV$_{DSS}$ (V)	R$_{DS(ON)}$ max (Ω)	I$_{D(ON)}$ min (A)	C$_{ISS}$ max (pF)	V$_{GS(TH)}$ max (V)	Packages
P-Channel Enhancement Mode MOSFETs						
LP0701	−16.5	1.5	−1.25	250	−1.0	TO-92
LP1030D	−300	180 (typ.)	−0.05	10.8 (typ.)	−2.4	SOT-23
TP0604	−40	2.0	−2.0	150	−2.4	TO-92
TP0606	−60	3.5	−1.5	150	−2.4	TO-92
TP0610T	−60	10	−0.05	60	−2.4	SOT-23
TP0620	−200	12	−0.75	150	−2.4	TO-92
TP2104	−40	6.0	−0.6	60	−2.0	SOT-23, TO-92
TP2424	−240	8.0	−0.8	200	−2.4	SOT-89
TP2435	−350	15	−0.8	200	−2.4	SOT-89
TP2502	−20	2.0	−2.0	125	−2.4	SOT-89
TP2510	−100	3.5	−1.5	125	−2.4	SOT-89
TP2520	−200	12	−0.75	125	−2.0	SOT-89
TP2522	−220	12	−0.75	125	−2.4	SOT-89
TP2535	−350	25	−0.4	125	−2.4	TO-92
TP2540	−400	25	−0.4	125	−2.4	TO-92, SOT-89
TP2635	−350	15	−0.7	300	−2.0	TO-92
TP2640	−400	15	−0.7	300	−2.0	TO-92, SOIC-8
TP5322	−220	12	−0.7	110	−2.4	SOT-23, SOT-89
TP5335	−350	30	−0.4	110	−2.4	SOT-23
VP0104	−40	8.0	−0.5	60	−3.5	TO-92
VP0106	−60	8.0	−0.5	60	−3.5	TO-92
VP0109	−90	8.0	−0.5	60	−3.5	TO-92
VP0550	−500	125	−0.1	70	−4.5	TO-92
VP0808	−80	5.0	−1.1	150	−4.5	TO-92
VP2106	−60	12	−0.5	60	−3.5	TO-92
VP2110	−100	12	−0.5	60	−3.5	SOT-23
VP2206	−60	0.9	−4.0	450	−3.5	TO-92, TO-39
VP2450	−500	30	−0.2	190	−3.5	TO-92, SOT-89
VP3203	−30	0.6	−4.0	300	−3.5	TO-92, SOT-89

POWER MANAGEMENT: MOSFETs (Continued)

Part #	Channels	BV$_{DSS}$ min (V)	R$_{DS(ON)}$ max (Ω)	C$_{ISS}$ typical (pF)	V$_{GS(TH)}$ max (V)	Packages
Enhancement Mode MOSFET Arrays: N-Channel						
TD9944	2	240	6.0	65	2.0	SOIC-8

POWER MANAGEMENT: MOSFETs (Continued)

Part #	Channels	BV$_{DSS}$ min (V)	R$_{DS(ON)}$ max (Ω)	Packages
Enhancement Mode MOSFET Arrays: P-Channel				
TP0604	4	−40	2.0	SOIC-20

POWER MANAGEMENT: MOSFETs (Continued)

Part #	BV$_{DSS}$/BV$_{DGS}$ N-Channel (V)	BV$_{DSS}$/BV$_{DGS}$ P-Channel (V)	R$_{DS(ON)}$ N-Channel max (Ω)	R$_{DS(ON)}$ P-Channel max (Ω)	V$_{GS(TH)}$ max (V)	Packages
Enhancement Mode MOSFET Arrays: Complementary MOSFET Arrays						
TC1550[1]	500	−500	60	125	4.0	SOIC-8
TC2320[1]	200	−200	7.0	12	2.0	SOIC-8
TC6215[1]	150	−150	4.0	7.0	2.0	SOIC-8
TC6320[1]	200	−200	7.0	8.0	2.0	QFN-8, SOIC-8
TC7320[2]	200	−200	20	20	0.4 (typ)	LQFP-32

Note 1: N & P-channel pair
Note 2: Six N & P-channel pairs

POWER MANAGEMENT: MOSFETs (Continued)

Part #	BV$_{(CONTINUOUS)}$ (V)	IC$_{(CONTINUOUS)}$ (A)	IC$_{(PULSED)}$ (A)	Packages
Insulated Gate Bipolar Transistors (IGBT)				
GN2470	700	1.0	3.5	TO-252

POWER MANAGEMENT: Inductorless Off-Line/Linear Regulator ICs

Part #	V$_{IN}$ (VAC)	Adjutable V$_{OUT}$ (V)	Fixed V$_{OUT}$ (V)	I$_{OUT}$ max (mA)	Load Regulation (%/mA)	Packages
Inductorless Off-Line Regulator ICs						
SR086	80–285	9.0–50	3.3	100	0.025	8-Lead SOIC w/ Heat Slug
SR087	80–285	9.0–50	5.0	100	0.017	8-Lead SOIC w/ Heat Slug
SR10	80–285	6.0–28	6.0, 12, 24	60	–	8-Lead SOIC

POWER MANAGEMENT: Inductorless Off-Line/Linear Regulator ICs (Continued)

Part #	+V$_{IN}$ min (V)	+V$_{IN}$ max (V)	Output Voltage (V)	Max Output Current (mA)	Typical Line Regulation (%/V)	Typical Load Regulation (%/mA)	Packages
Linear Regulator ICs							
LR8	12	450	1.2–440	10	0.003	0.15	3-Lead TO-252, 3-Lead TO-92, 3-Lead SOT-89
LR12	12	100	1.2–88	50	0.003	0.06	3-Lead TO-252, 8-Lead SOIC, 3-Lead TO-92
LR645	15	450	10	3.0	0.0001	0.5	8-Lead SOIC, 3-Lead TO-92, 3-Lead TO-220, 3-Lead SOT-89
LR745	25	450	20	2.0	0.0001	0.5	3Lead TO-92 , 3Lead SOT-89

LINEAR

LINEAR: Op Amps

Part #	# per Package	GBWP	I$_Q$ Typical (µA)	V$_{OS}$ Max (mV)	Typical Input Bias Current (pA)	Input Voltage Noise Density (nV/rtHz)	Operating Voltage (V)	Temperature Range (°C)	Features	Packages
MCP6441	1	9 kHz	0.45	4.5	1	190[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	5-pin SOT-23[S], 5-pin SC-70[S]
MCP6442	2	9 kHz	0.45	4.5	1	190[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 TDFN
MCP6444	4	9 kHz	0.45	4.5	1	190[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6031	1	10 kHz	0.9	0.15	1	165[1]	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 DFN, 5-pin SOT-23
MCP6032	2	10 kHz	0.9	0.15	1	165[1]	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP
MCP6033	1	10 kHz	0.9	0.15	1	165[1]	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output, Chip select	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 DFN
MCP6034	4	10 kHz	0.9	0.15	1	165[1]	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6041	1	14 kHz	0.6	3	1	170[1]	1.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 5-pin SOT-23[S]

Legend: S = Standard Pinout; R = Reverse Pinout; U = Alternative Pinout
Note 1: Values are typical at 1 kHz
2: Values are typical at 10 kHz

Part #	# per Package	GBWP	Iq Typical (µA)	Vos Max (mV)	Typical Input Bias Current (pA)	Input Voltage Noise Density (nV/rtHz)	Operating Voltage (V)	Temperature Range (°C)	Features	Packages
MCP6042	2	14 kHz	0.6	3	1	170[1]	1.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6043	1	14 kHz	0.6	3	1	170[1]	1.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 6-pin SOT-23[S]
MCP6044	4	14 kHz	0.6	3	1	170[1]	1.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6421	1	90 kHz	4.4	1	1	95[1]	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output, Enhanced EMI Rejection	5-pin SOT-23[S], 5-pin SC-70[S]
MCP6422	2	90 kHz	4.4	1	1	95[1]	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output, Enhanced EMI Rejection	8-pin SOIC, 8-pin MSOP
MCP6424	4	90 kHz	4.4	1	1	95[1]	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output, Enhanced EMI Rejection	14-pin SOIC, 14-pin TSSOP
MCP6141	1	100 kHz	0.6	3	1	170[1]	1.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output, G >10 stable	5-pin SOT-23[S], 8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6142	2	100 kHz	0.6	3	1	170[1]	1.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output, G >10 stable	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6143	1	100 kHz	0.6	3	1	170[1]	1.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output, G >10 stable, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 6-pin SOT-23[S]
MCP6144	4	100 kHz	0.6	3	1	170[1]	1.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output, G >10 stable	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP606	1	155 kHz	19	0.25	1	38[1]	2.5 to 6.0	−40 to +85	Rail-to-Rail Output	8-pin PDIP, 8-pin SOIC, 8-pin TSSOP, 5-pin SOT23[S]
MCP607	2	155 kHz	19	0.25	1	38[1]	2.5 to 6.0	−40 to +85	Rail-to-Rail Output	8-pin PDIP, 8-pin SOIC, 8-pin TSSOP
MCP608	1	155 kHz	19	0.25	1	38[1]	2.5 to 6.0	−40 to +85	Rail-to-Rail Output, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin TSSOP
MCP609	4	155 kHz	19	0.25	1	38[1]	2.5 to 6.0	−40 to +85	Rail-to-Rail Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP616	1	190 kHz	19	0.15	15000	32[1]	2.3 to 5.5	−40 to +85	Rail-to-Rail Output, PNP input	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP617	2	190 kHz	19	0.15	15000	32[1]	2.3 to 5.5	−40 to +85	Rail-to-Rail Output, PNP input	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP618	1	190 kHz	19	0.15	15000	32[1]	2.3 to 5.5	−40 to +85	Rail-to-Rail Output, Chip select, PNP input	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP619	4	190 kHz	19	0.15	15000	32[1]	2.3 to 5.5	−40 to +85	Rail-to-Rail Output, PNP input	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6231	1	300 kHz	20	5	1	52[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 TDFN, 5-pin SC-70[U], 5-pin SOT-23[S, R, U]
MCP6232	2	300 kHz	20	5	1	52[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 TDFN
MCP6234	4	300 kHz	20	5	1	52[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6051	1	385 kHz	30	0.15	1	34[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin 2 × 3 DFN, 5-pin SOT-23(S)
MCP6052	2	385 kHz	30	0.15	1	34[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin 2 × 3 DFN
MCP6054	4	385 kHz	30	0.15	1	34[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6241	1	550 kHz	50	5	1	45[1]	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 TDFN, 5-pin SC-70[U], 5-pin SOT-23[S, R, U]
MCP6242	2	550 kHz	50	5	1	45[1]	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6244	4	550 kHz	50	5	1	45[1]	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6061	1	730 kHz	60	0.15	1	25[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin 2 × 3 DFN, 5-pin SOT-23[S]
MCP6062	2	730 kHz	60	0.15	1	25[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin 2 × 3 DFN
MCP6064	4	730 kHz	60	0.15	1	25[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6001	1	1 MHz	100	4.5	1	28[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	5-pin SOT-23[S, R, U], 5-pin SC-70[R]
MCP6002	2	1 MHz	100	4.5	1	28[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 DFN
MCP6004	4	1 MHz	100	4.5	1	28[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6401	1	1 MHz	45	4.5	1	28[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	5-pin SOT-23[S, R, U], 5-pin SC-70[R]
MCP6402	2	1 MHz	45	4.5	1	28[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6404	4	1 MHz	45	4.5	1	28[1]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6L01	1	1 MHz	85	5	2	24[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	5-pin SOT-23[S, R, U], 5-pin SC-70[S]
MCP6L02	2	1 MHz	85	5	2	24[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP
MCP6L04	4	1 MHz	85	5	2	24[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6071	1	1.2 MHz	110	0.15	1	19[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin 2 × 3 DFN, 5-pin SOT-23[S]
MCP6072	2	1.2 MHz	110	0.15	1	19[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin 2 × 3 DFN
MCP6074	4	1.2 MHz	110	0.15	1	19[2]	1.8 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6H01	1	1.2 MHz	135	3.5	10	35[1]	Single Supply: 3.5 to 16 Dual Supply: ±1.75 to ±8	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 2 × 3 TDFN, 5-pin SOT-23[S], 5-pin SC-70[S]
MCP6H02	2	1.2 MHz	135	3.5	10	35[1]	Single Supply: 3.5 to 16 Dual Supply: ±1.75 to ±8	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6H04	4	1.2 MHz	135	3.5	10	35[1]	Single Supply: 3.5 to 16 Dual Supply: ±1.75 to ±8	−40 to +125	Rail-to-Rail Output	14-pin SOIC, 14-pin TSSOP

Legend: S = Standard Pinout; R = Reverse Pinout; U = Alternative Pinout
Note 1: Values are typical at 1 kHz
    2: Values are typical at 10 kHz

LINEAR: Op Amps (Continued)

Part #	# per Package	GBWP	Iq Typical (µA)	Vos Max (mV)	Typical Input Bias Current (pA)	Input Voltage Noise Density (nV/rtHz)	Operating Voltage (V)	Temperature Range (°C)	Features	Packages
MCP6271	1	2 MHz	170	3	1	20[1]	2.0 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 5-pin SOT-23[S, R]
MCP6272	2	2 MHz	170	3	1	20[1]	2.0 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6273	1	2 MHz	170	3	1	20[1]	2.0 to 6.0	−40 to +125	Rail-to-Rail Input/Output, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 6-pin SOT-23[S]
MCP6274	4	2 MHz	170	3	1	20[1]	2.0 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6275	2	2 MHz	150	3	1	20[1]	2.0 to 6.0	−40 to +125	Rail-to-Rail Input/Output, Dual connected, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6471	1	2 MHz	100	1.5	1	27[1]	2.0 to 5.5	−40 to +125	Rail-to-Rail Input/Output	5-pin SOT-23[S], 5-pin SC-70[S]
MCP6472	2	2 MHz	100	1.5	1	27[1]	2.0 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 TDFN
MCP6474	4	2 MHz	100	1.5	1	27[1]	2.0 to 5.5	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6L71	1	2 MHz	150	4	1	19[2]	2.0 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC[S], 8-pin MSOP[S], 5-pin SOT-23[S, R]
MCP6L72	2	2 MHz	150	4	1	19[2]	2.0 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP
MCP6L74	4	2 MHz	150	4	1	19[2]	2.0 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6H71	1	2.7 MHz	480	4	10	28[1]	Single Supply: 3.5 to 12 Dual Supply: ±1.75 to ±6	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6H72	2	2.7 MHz	480	4	10	28[1]	Single Supply: 3.5 to 12 Dual Supply: ±1.75 to ±6	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6H74	4	2.7 MHz	480	4	10	28[1]	Single Supply: 3.5 to 12 Dual Supply: ±1.75 to ±6	−40 to +125	Rail-to-Rail Output	14-pin SOIC, 14-pin TSSOP
MCP601	1	2.8 MHz	230	2	1	29[1]	2.7 to 6.0	−40 to +125	Rail-to-Rail Output	8-pin PDIP, 8-pin SOIC, 8-pin TSSOP, 5-pin SOT-23[S, R]
MCP602	2	2.8 MHz	230	2	1	29[1]	2.7 to 6.0	−40 to +125	Rail-to-Rail Output	8-pin PDIP, 8-pin SOIC, 8-pin TSSOP
MCP603	1	2.8 MHz	230	2	1	29[1]	2.7 to 6.0	−40 to +125	Rail-to-Rail Output, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin TSSOP, 6-pin SOT-23[S]
MCP604	4	2.8 MHz	230	2	1	29[1]	2.7 to 6.0	−40 to +125	Rail-to-Rail Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6L1	1	2.8 MHz	200	3	1	21[2]	2.7 to 6.0	−40 to +125	Rail-to-Rail Output	8-pin SOIC[S], 8-pin MSOP[S], 5-pin SOT-23[S, R]
MCP6L2	2	2.8 MHz	200	3	1	21[2]	2.7 to 6.0	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin MSOP
MCP6L4	4	2.8 MHz	200	3	1	21[2]	2.7 to 6.0	−40 to +125	Rail-to-Rail Output	14-pin SOIC, 14-pin TSSOP
MCP6286	1	3.5 MHz	540	1.5	1	5.4[2]	2.2 to 5.5	−40 to +125	Rail-to-Rail Output, Low noise	5-pin SOT-23[S, R]
MCP6481	1	4 MHz	240	1.5	1	23[1]	2.2 to 5.5	−40 to +125	Rail-to-Rail Input/Output	5-pin SOT-23[S], 5-pin SC-70[S]
MCP6482	2	4 MHz	240	1.5	1	23[1]	2.2 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 TDFN
MCP6484	4	4 MHz	240	1.5	1	23[1]	2.2 to 5.5	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6281	1	5 MHz	445	3	1	16[1]	2.2 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 5-pin SOT-23[S, R]
MCP6282	2	5 MHz	445	3	1	16[1]	2.2 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6283	1	5 MHz	445	3	1	16[1]	2.2 to 6.0	−40 to +125	Rail-to-Rail Input/Output, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 6-pin SOT-23[S, R]
MCP6284	4	5 MHz	445	3	1	16[1]	2.2 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6285	2	5 MHz	400	3	1	16[1]	2.2 to 6.0	−40 to +125	Rail-to-Rail Input/Output, Dual connected, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6H81	1	5.5 MHz	700	4	10	23[1]	Single Supply: 3.5 to 12 Dual Supply: ±1.75 to ±6	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6H82	2	5.5 MHz	700	4	10	23[1]	Single Supply: 3.5 to 12 Dual Supply: ±1.75 to ±6	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6H84	4	5.5 MHz	700	4	10	23[1]	Single Supply: 3.5 to 12 Dual Supply: ±1.75 to ±6	−40 to +125	Rail-to-Rail Output	14-pin SOIC, 14-pin 2 × 3 TDFN
MCP6491	1	7.5 MHz	530	1.5	1	19[1]	2.4 to 5.5	−40 to +125	Rail-to-Rail Input/Output	5-pin SOT-23[S], 5-pin SC-70[S]
MCP6492	2	7.5 MHz	530	1.5	1	19[1]	2.4 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 TDFN
MCP6494	4	7.5 MHz	530	1.5	1	19[1]	2.4 to 5.5	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6021	1	10 MHz	1000	0.5	1	8.7[2]	2.5 to 5.5	−40 to +125	Rail-to-Rail Input/Output, 1/2 V_{CC} V_{REF}	8-pin PDIP, 8-pin SOIC, 8-pin TSSOP, 8-pin MSOP, 5-pin SOT-23[S, R]
MCP6022	2	10 MHz	1000	0.5	1	8.7[2]	2.5 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin TSSOP
MCP6023	1	10 MHz	1000	0.5	1	8.7[2]	2.5 to 5.5	−40 to +125	Rail-to-Rail Input/Output, Chip select, 1/2 V_{CC} V_{REF}	8-pin PDIP, 8-pin SOIC, 8-pin TSSOP
MCP6024	4	10 MHz	1000	0.5	1	8.7[2]	2.5 to 5.5	−40 to +125	Rail-to-Rail Input/Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6291	1	10 MHz	1000	3	1	8.7[2]	2.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 5-pin SOT-23[S, R]
MCP6292	2	10 MHz	1000	3	1	8.7[2]	2.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP

Legend: S = Standard Pinout; R = Reverse Pinout; U = Alternative Pinout
Note 1: Values are typical at 1 kHz
   2: Values are typical at 10 kHz

Part #	# per Package	GBWP	Iq Typical (µA)	Vos Max (mV)	Typical Input Bias Current (pA)	Input Voltage Noise Density (nV/rtHz)	Operating Voltage (V)	Temperature Range (°C)	Features	Packages
MCP6293	1	10 MHz	1000	3	1	8.7[2]	2.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 6-pin SOT-23[S]
MCP6294	4	10 MHz	1000	3	1	8.7[2]	2.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6295	2	10 MHz	1100	3	1	8.7[2]	2.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output, Dual connected, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6H91	1	10 MHz	2000	4	10	23[1]	Single Supply: 3.5 to 12 Dual Supply: ±1.75 to ±6	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6H92	2	10 MHz	2000	4	10	23[1]	Single Supply: 3.5 to 12 Dual Supply: ±1.75 to ±6	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6H94	4	10 MHz	2000	4	10	23[1]	Single Supply: 3.5 to 12 Dual Supply: ±1.75 to ±6	−40 to +125	Rail-to-Rail Output	14-pin SOIC, 14-pin TSSOP
MCP6L91	1	10 MHz	850	4	1	9.4[2]	2.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC[S], 8-pin MSOP[S], 5-pin SOT-23[S, R]
MCP6L92	2	10 MHz	850	4	1	9.4[2]	2.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP
MCP6L94	4	10 MHz	850	4	1	9.4[2]	2.4 to 6.0	−40 to +125	Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP621	1	20 MHz	2500	0.2	5	13[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip select, mCal Technology	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP621S	1	20 MHz	2500	0.2	5	13[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, mCal Technology	5-pin SOT-23[S]
MCP622	2	20 MHz	2500	0.2	5	13[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, mCal Technology	8-pin SOIC, 8-pin 3 × 3 DFN
MCP623	1	20 MHz	2500	0.2	5	13[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip select, mCal Technology	6-pin SOT-23[S]
MCP624	4	20 MHz	2500	0.2	5	13[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, mCal Technology	14-pin SOIC, 14-pin TSSOP
MCP625	2	20 MHz	2500	0.2	5	13[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip selects, mCal Technology	10-pin MSOP, 10-pin 3 × 3 DFN
MCP629	4	20 MHz	2500	0.2	5	13[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip selects, mCal Technology	16-pin 4 × 4 QFN
MCP631	1	24 MHz	2500	8	4	10[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 2 × 3 TDFN, 5-pin SOT-23[S]
MCP632	2	24 MHz	2500	8	4	10[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 3 × 3 DFN
MCP633	1	24 MHz	2500	8	4	10[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip select	8-pin SOIC, 6-pin SOT-23
MCP634	4	24 MHz	2500	8	4	10[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output	14-pin SOIC, 14-pin TSSOP
MCP635	2	24 MHz	2500	8	4	10[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip selects	10-pin MSOP, 10-pin 3 × 3 DFN
MCP639	4	24 MHz	2500	8	4	10[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip selects	16-pin 4 × 4 QFN
MCP651	1	50 MHz	6000	0.2	6	7.5[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip select, mCal Technology	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP651S	1	50 MHz	6000	0.2	6	7.5[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, mCal Technology	5-pin SOT-23[S]
MCP652	2	50 MHz	6000	0.2	6	7.5[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, mCal Technology	8-pin SOIC, 8-pin 3 × 3 DFN
MCP653	1	50 MHz	6000	0.2	6	7.5[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip select, mCal Technology	6-pin SOT-23[S]
MCP654	4	50 MHz	6000	0.2	6	7.5[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, mCal Technology	14-pin SOIC, 14-pin TSSOP
MCP655	2	50 MHz	6000	0.2	6	7.5[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip selects, mCal Technology	10-pin MSOP, 10-pin 3 × 3 DFN
MCP659	4	50 MHz	6000	0.2	6	7.5[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip selects, mCal Technology	16-pin 4 × 4 QFN
MCP660	3	60 MHz	6000	8	6	6.8[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output	14-pin SOIC, 14-pin TSSOP
MCP661	1	60 MHz	6000	8	6	6.8[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 2 × 3 TDFN, 5-pin SOT-23[S]
MCP662	2	60 MHz	6000	8	6	6.8[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output	8-pin SOIC, 8-pin 3 × 3 DFN
MCP663	1	60 MHz	6000	8	6	6.8[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip select	8-pin SOIC, 6-pin SOT-23
MCP664	4	60 MHz	6000	8	6	6.8[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output	14-pin SOIC, 14-pin TSSOP
MCP665	2	60 MHz	6000	8	6	6.8[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip selects	10-pin MSOP, 10-pin 3 × 3 DFN
MCP669	4	60 MHz	6000	8	6	6.8[3]	2.5 to 5.5	−40 to +125	Rail-to-Rail Output, Chip selects	16-pin 4 × 4 QFN

Legend: S = Standard Pinout; R = Reverse Pinout; U = Alternative Pinout
Note 1: Values are typical at 1 kHz
    2: Values are typical at 10 kHz
    3: Values are typical at 1 MHz

LINEAR: Zero-Drift Operational Amplifiers

Part #	# per Package	GBWP	IQ Max (mA)	VOS Max (µV)	VOS Drift Max (µV/°C)	Operating Voltage (V)	Temperature Range (°C)	Features	Packages
MCP6V11	1	80 kHz	0.011	8	0.05	1.6 to 5.5	−40 to +125	Rail-to-Rail Input/Output	5-pin SOT-23(S, U), 5-pin SOT-70(U)
MCP6V12	2	80 kHz	0.011	8	0.05	1.6 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin 2 × 3 TDFN, 8-pin MSOP
MCP6V14	4	80 kHz	0.011	8	0.05	1.6 to 5.5	−40 to +125	Rail-to-Rail Input/Output	14-pin TSSOP
MCP6V31	1	300 kHz	0.034	8	0.05	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	5-pin SOT-23(S, U), 5-pin SOT-70(U)
MCP6V32	2	300 kHz	0.034	8	0.05	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin 2 × 3 TDFN, 8-pin MSOP
MCP6V34	4	300 kHz	0.034	8	0.05	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	14-pin TSSOP
TC7652	1	0.4 MHz	3	5	0.05	5 to 16	0 to +70	Single and Split Supply, Low Noise	8-pin PDIP, 14-pin PDIP
MCP6V01	1	1.3 MHz	0.4	2	0.05	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6V02	2	1.3 MHz	0.4	2	0.05	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin 4 × 4 DFN
MCP6V03	1	1.3 MHz	0.4	2	0.05	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output, Chip select	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6V06	1	1.3 MHz	0.4	3	0.05	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6V07	2	1.3 MHz	0.4	3	0.05	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin 4 × 4 DFN
MCP6V08	1	1.3 MHz	0.4	3	0.05	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output, Chip select	8-pin SOIC, 8-pin 2 × 3 TDFN
TC913A/B	2	1.5 MHz	1.1	15	0.15/0.30	7 to 16	0 to +70	Single and Split Supply	8-pin PDIP, 8-pin SOIC
TC7650	1	2 MHz	3.5	5	0.05	4.5 to 16	0 to +70	Single and Split Supply	8-pin PDIP, 14-pin PDIP
MCP6V26	1	2 MHz	0.8	2	0.05	2.3 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 TDFN
MCP6V27	2	2 MHz	0.8	2	0.05	2.3 to 5.5	−40 to +125	Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP, 8-pin 4 × 4 DFN
MCP6V28	1	2 MHz	0.8	2	0.05	2.3 to 5.5	−40 to +125	Rail-to-Rail Input/Output, Chip select	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 TDFN

LINEAR: Programmable Gain Amplifiers (PGA)

Part #	Channels	−3dB BW (MHz)	IQ Typ. (mA)	VOS (µV)	Operating Voltage (V)	Temperature Range (°C)	Features	Packages
MCP6S21	1	2 to 12	1.1	275	2.5 to 5.5	−40 to +85	SPI, 8 Gain steps, Software shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6S22	2	2 to 12	1.1	275	2.5 to 5.5	−40 to +85	SPI, 8 Gain steps, Software shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6S26	6	2 to 12	1.1	275	2.5 to 5.5	−40 to +85	SPI, 8 Gain steps, Software shutdown	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6S28	8	2 to 12	1.1	275	2.5 to 5.5	−40 to +85	SPI, 8 Gain steps, Software shutdown	16-pin PDIP, 16-pin SOIC
MCP6S91	1	1 to 18	1.0	4000	2.5 to 5.5	−40 to +125	SPI, 8 Gain steps, Software shutdown, VREF	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6S92	2	1 to 18	1.0	4000	2.5 to 5.5	−40 to +125	SPI, 8 Gain steps, Software shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6S93	2	1 to 18	1.0	4000	2.5 to 5.5	−40 to +125	SPI, 8 Gain steps, Software shutdown, VREF, SO	10-pin MSOP

LINEAR: Selectable Gain Amplifiers (SGA)

Part #	Channels	−3dB BW (kHz)	IQ (µA)	VOS (mV)	Operating Voltage (V)	Temperature Range (°C)	Gain Steps (V/V)	Features	Packages
MCP6G01	1	900	110	4.5	1.8 to 5.5	−40 to +125	1, 10, 50	Tri-State control pin	8-pin SOIC, 8-pin MSOP, 5-pin SOT-23(S, R, U)
MCP6G02	2	900	110	4.5	1.8 to 5.5	−40 to +125	1, 10, 50	Tri-State control pin	8-pin SOIC, 8-pin MSOP
MCP6G03	1	900	110	4.5	1.8 to 5.5	−40 to +125	1, 10, 50	Tri-State control pin, Chip select	8-pin SOIC, 8-pin MSOP
MCP6G04	4	900	110	4.5	1.8 to 5.5	−40 to +125	1, 10, 50	Tri-State control pin	14-pin SOIC, 14-pin TSSOP

LINEAR: Instrumentation Amplifiers

Part #	# Per Package	Bandwidth (kHz)	IQ Max (mA)	Max VOS (µV)	VOS Drift Max (µV/°C)	Operating Voltage (V)	Temperature Range (°C)	Features	Packages
MCP6N11	1	500	1.1	350	2.7	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output, mCal Technology	8-pin SOIC, 8-pin 2 × 3 TDFN
MCP6N16	1	500	1.6	17	0.06	1.8 to 5.5	−40 to +125	Rail-to-Rail Input/Output, Enable Pin, Enhanced EMI Rejection	8-pin MSOP, 8-pin 3 × 3 DFN

Legend: S = Standard Pinout; R = Reverse Pinout; U = Alternative Pinout

LINEAR: Comparators

Part #	# per Package	V_{REF} (V)	Typical Propagation Delay (µs)	I_Q Typical (µA)	V_{OS} Max (mV)	Operating Voltage (V)	Temperature Range (°C)	Features	Packages
MCP6541	1	–	4	1	5	1.6 to 5.5	−40 to +125	Push-Pull, Rail-to-Rail Input/Output	5-pin SOT-23(S, R, U), 5-pin SC-70(S, U), 8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6542	2	–	4	1	5	1.6 to 5.5	−40 to +125	Push-Pull, Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6543	1	–	4	1	5	1.6 to 5.5	−40 to +125	Push-Pull, Rail-to-Rail Input/Output, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6544	4	–	4	1	5	1.6 to 5.5	−40 to +125	Push-Pull, Rail-to-Rail Input/Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP6546	1	–	4	1	5	1.6 to 5.5	−40 to +125	Open-drain, 9V, Rail-to-Rail Input/Output	5-pin SOT-23(S, R, U), 5-pin SC-70(S, U), 8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6547	2	–	4	1	5	1.6 to 5.5	−40 to +125	Open-drain, 9V, Rail-to-Rail Input/Output	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6548	1	–	4	1	5	1.6 to 5.5	−40 to +125	Open-drain, 9V, Rail-to-Rail Input/Output, Chip select	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP6549	4	–	4	1	5	1.6 to 5.5	−40 to +125	Open-drain, 9V, Rail-to-Rail Input/Output	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP65R41	1	1.21/2.4	4	2.5	10	1.8 to 5.5	−40 to +125	Push-Pull, Rail-to-Rail Input/Output, V_{REF}	6-pin SOT-23
MCP65R46	1	1.21/2.4	4	2.5	10	1.8 to 5.5	−40 to +125	Open Drain, Rail-to-Rail Input/Output, V_{REF}	6-pin SOT-23
MCP6561	1	–	0.047	100	10	1.8 to 5.5	−40 to +125	Push-Pull, Rail-to-Rail Input/Output	5-pin SOT-23(S, R, U), 5-pin SC-70(S)
MCP6562	2	–	0.047	100	10	1.8 to 5.5	−40 to +125	Push-Pull, Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP
MCP6564	4	–	0.047	100	10	1.8 to 5.5	−40 to +125	Push-Pull, Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP
MCP6566	1	–	0.047	100	10	1.8 to 5.5	-40 to +125	Open-Drain, Rail-to-Rail Input/Output	5-pin SOT-23(S, R, U), 5-pin SC-70(S)
MCP6567	2	–	0.047	100	10	1.8 to 5.5	-40 to +125	Open-Drain, Rail-to-Rail Input/Output	8-pin SOIC, 8-pin MSOP
MCP6569	4	–	0.047	100	10	1.8 to 5.5	-40 to +125	Open-Drain, Rail-to-Rail Input/Output	14-pin SOIC, 14-pin TSSOP

Legend: S = Standard Pinout; R = Reverse Pinout; U = Alternative Pinout

MIXED SIGNAL

MIXED SIGNAL: Successive Approximation Register (SAR) A/D Converters

Part #	Resolution (bits)	Maximum Sampling Rate (ksamples/sec)	# of Input Channels	Input Type	Interface	Input Voltage Range (V)	Max. Supply Current (µA)	Max. INL	Temperature Range (°C)	Packages
MCP3021	10	22	1	Single-ended	I²C™	2.7 to 5.5	250	±1 LSB	−40 to +125	5-pin SOT-23A
MCP3001	10	200	1	Single-ended	SPI	2.7 to 5.5	500	±1 LSB	−40 to +85	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin TSSOP
MCP3002	10	200	2	Single-ended	SPI	2.7 to 5.5	650	±1 LSB	−40 to +85	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin TSSOP
MCP3004	10	200	4	Single-ended	SPI	2.7 to 5.5	550	±1 LSB	−40 to +85	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP3008	10	200	8	Single-ended	SPI	2.7 to 5.5	550	±1 LSB	−40 to +85	16-pin PDIP, 16-pin SOIC
MCP3221	12	22	1	Single-ended	I²C	2.7 to 5.5	250	±2 LSB	−40 to +125	5-pin SOT-23A
MCP3201	12	100	1	Single-ended	SPI	2.7 to 5.5	400	±1 LSB	−40 to +85	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin TSSOP
MCP3202	12	100	2	Single-ended	SPI	2.7 to 5.5	550	±1 LSB	−40 to +85	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin TSSOP
MCP3204	12	100	4	Single-ended	SPI	2.7 to 5.5	400	±1 LSB	−40 to +85	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP3208	12	100	8	Single-ended	SPI	2.7 to 5.5	400	±1 LSB	−40 to +85	16-pin PDIP, 16-pin SOIC
MCP3301	13	100	1	Differential	SPI	2.7 to 5.5	450	±1 LSB	−40 to +85	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin TSSOP
MCP3302	13	100	2	Differential	SPI	2.7 to 5.5	450	±1 LSB	−40 to +85	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP3304	13	100	4	Differential	SPI	2.7 to 5.5	450	±1 LSB	−40 to +85	16-pin PDIP, 16-pin SOIC

MIXED SIGNAL: Delta-Sigma A/D Converters

Part #	Resolution (bits)	Maximum Sampling Rate (samples/sec)	# of Input Channels	Interface	Supply Voltage Range (V)	Typical Supply Current (µA)	Typical INL (ppm)	Temperature Range (°C)	Features	Packages
MCP3421	18 to 12	4 to 240	1 Diff	I²C™	2.7 to 5.5	155	10	−40 to +125	PGA, V$_{REF}$	6-pin SOT-23A
MCP3422	18 to 12	4 to 240	2 Diff	I²C	2.7 to 5.5	145	10	−40 to +125	PGA, V$_{REF}$	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 DFN
MCP3423	18 to 12	4 to 240	2 Diff	I²C	2.7 to 5.5	145	10	−40 to +125	PGA, V$_{REF}$, Selectable I²C addressing	10-pin MSOP, 10-pin 3 × 3 DFN
MCP3424	18 to 12	4 to 240	4 Diff	I²C	2.7 to 5.5	145	10	−40 to +125	PGA, V$_{REF}$, Selectable I²C addressing	14-pin SOIC, 14-pin TSSOP
MCP3425	16 to 12	15 to 240	1 Diff	I²C	2.7 to 5.5	155	10	−40 to +125	PGA, V$_{REF}$	6-pin SOT-23A
MCP3426	16 to 12	15 to 240	2 Diff	I²C	2.7 to 5.5	145	10	−40 to +125	PGA, V$_{REF}$	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 DFN
MCP3427	16 to 12	15 to 240	2 Diff	I²C	2.7 to 5.5	145	10	−40 to +125	PGA, V$_{REF}$, Selectable I²C addressing	10-pin MSOP, 10-pin 3 × 3 DFN
MCP3428	16 to 12	15 to 240	4 Diff	I²C	2.7 to 5.5	145	10	−40 to +125	PGA, V$_{REF}$, Selectable I²C addressing	14-pin SOIC, 14-pin TSSOP
MCP3550-50	22	13	1 Diff	SPI	2.7 to 5.5	120	2	−40 to +125	50 Hz rejection	8-pin SOIC, 8-pin MSOP
MCP3550-60	22	15	1 Diff	SPI	2.7 to 5.5	140	2	−40 to +125	60 Hz rejection	8-pin SOIC, 8-pin MSOP
MCP3551	22	14	1 Diff	SPI	2.7 to 5.5	120	2	−40 to +125	Simultaneous 50/60 Hz rejection	8-pin SOIC, 8-pin MSOP
MCP3553	20	60	1 Diff	SPI	2.7 to 5.5	140	2	−40 to +125		8-pin SOIC, 8-pin MSOP

MIXED SIGNAL: Pipelined A/D Coverters

Part #	Resolution	Max Sample Rate (Msamples/sec)	# of Input Channels	Input Type	Interface	Supply Voltage (V)	Power Dissipation (mW)	Input Channel BW (MHz)	SNR (dB)	SFDR (dB)	Input Range (Vp-p)	Feature	Temperature Range (°C)	Packages
MCP37D31-200	16	200	8-mux	Differential	Parallel CMOS/ Serial DDR LVDs	1.2, 1.8	490	500	74	90	2.98	Decimation filters, digital down-converter	−40 to +85	124-pin VTLA
MCP37231-200	16	200	8-mux	Differential	Parallel CMOS/ Serial DDR LVDs	1.2, 1.8	490	500	74	90	2.98	Decimation filters	−40 to +85	124-pin VTLA

MIXED SIGNAL: Energy Measurement ICs

Part #	ADC Channels	ADC SINAD	Dynamic Range	Gain Selection	Output Type	Typical Voltage Reference Drift (ppm/°C)	Analog Voltage Range (V)	Digital Voltage Range (V)	Typical Accuracy	Temperature Range (°C)	Features	Packages
MCP3918	1	93.5 dB	10000:1	up to 32	SPI/2-wire serial	9	2.7 to 3.6	2.7 to 3.6	0.1%	−40 to +125	AFE with phase correction, Programmable data rate, 16-bit CRC, Register map lock, 2-wire interface	20-pin SSOP, 20-pin 4 × 4 QFN
MCP3910	2	–	10000:1	up to 32	SPI/2-wire serial	9	2.7 to 3.6	2.7 to 3.6	0.1%	−40 to +125	Phase correction, Programmable data rate, 16-bit CRC, Register map lock, 2-wire interface	20-pin SSOP, 20-pin 4 × 4 QFN
MCP3911	2	94.5 dB	10000:1[1]	up to 32	SPI	7	2.7 to 3.6	2.7 to 3.6	0.1%	−40 to +125	AFE with phase correction, Programmable data rate	20-pin SSOP, 20-pin 4 × 4 QFN
MCP3901	2	91 dB	–[1]	up to 32	SPI	12	4.5 to 5.5	2.7 to 5.5	0.1%	−40 to +125	AFE with phase correction, Programmable data rate	20-pin SSOP, 20-pin 4 × 4 QFN
MCP3913	6	94.5 dB	10000:1	up to 32	SPI	9	2.7 to 3.6	2.7 to 3.6	0.1%	−40 to +125	AFE with phase correction, Programmable data rate, 16-bit CRC, Register map lock	28-pin SSOP, 40-pin 5 × 5 µQFN
MCP3903	6	91 dB	–[1]	up to 32	SPI	5	4.5 to 5.5	2.7 to 3.6	0.1%	−40 to +125	AFE with phase correction, Programmable data rate	28-pin SSOP
MCP3914	8	94.5 dB	10000:1	up to 32	SPI	9	2.7 to 3.6	2.7 to 3.6	0.1%	−40 to +125	AFE with phase correction, Programmable data rate, 16-bit CRC, Register map lock	40-pin 5 × 5 µQFN
MCP3905A	2	–	500:1	up to 16	Active power pulse	15	4.5 to 5.5	4.5 to 5.5	0.1%	−40 to +125	Active power calculation	24-pin SSOP
MCP3909	2	–	1000:1	up to 16	Active power pulse/SPI	15	4.5 to 5.5	4.5 to 5.5	0.1%	−40 to +125	Active power calculation	24-pin SSOP
MCP39F501	3	–	4000:1	up to 32	UART	10	2.7 to 3.6	2.7 to 3.6	0.1%	−40 to +125	Power monitoring IC with active, reactive, and apparent power, PF, RMS current/voltage, Frequency, event notifications, EEPROM	28-pin 5 × 5 QFN

Note 1: Not tested for this device

MIXED SIGNAL: Current/DC Power Measurement ICs

Part #	# of Current Sensors	Description	Full Scale Range (mV)	Current Measurement Max. Accr (%)	Effective Sampling Interval Min. to Max. (msec)	Bus Voltage Range (V)	# of Temp. Monitors (Ambient, Remote)	Temp. Accuracy Typ./Max. (°C)	Alert/ THERM	Peak Detection	Address Select	Package
PAC1710	1	SMBus/I²C™ Current/DC Power Sensor	10, 20, 40, 80	±1	2.5 to 2,600	0 to + 40	–	–	1	–	Yes	10-pin DFN
PAC1720	2	Dual SMBus/I²C Current/DC Power Sensor	10, 20, 40, 80	±1	2.5 to 2,600	0 to + 40	–	–	1	–	Yes	10-pin DFN
EMC1701-1	1	SMBus/I²C Current/DC Power Sensor with Temperature Monitoring	10, 20, 40, 80	±1	2.5 to 2,600	+3 to +24	1, 0	±0.25/±1	2	Hardware	Yes	12-pin 4 × 4 QFN
EMC1701-2	1	SMBus/I²C Current/DC Power Sensor with Temperature Monitoring	10, 20, 40, 80	±1	2.5 to 2,600	+3 to +24	1, 0	±0.25/±1	2	Software	Yes	10-pin MSOP
EMC1702-1	1	SMBus/I²C Current/DC Power Sensor with Two Temperature Monitors	10, 20, 40, 80	±1	2.5 to 2,600	+3 to +24	1, 1	±0.25/±1	2	Hardware	Yes	12-pin 4 × 4 QFN
EMC1704-1	1	SMBus/I²C Current/DC Power Sensor with Four Temperature Monitors	10, 20, 40, 80	±1	2.5 to 2,600	+3 to +24	1, 3	±0.25/±1	2	Software	Yes	14-pin SOIC
EMC1704-2	1	SMBus/I²C Current/DC Power Sensor with Four Temperature Monitors	10, 20, 40, 80	±1	2.5 to 2,600	+3 to +24	1, 3	±0.25/±1	2	Hardware	Yes	16-pin 4 × 4 QFN

MIXED SIGNAL: Dual Slope A/D Converters

Part #	Supply Voltage (V)	Input Voltage Range	Resolution	Sampling Rate (Conv/s)	Input Channels	Data Interface	Temperature Range (°C)	Features	Packages
TC500	±4.5 to ±7.5	Vss + 1.5V to VDD – 1.5V	Up to 16 bits	4 to 10	1	3-Wire	0 to +70	Differential input range, Programmable resolution/conversion time	16-pin PDIP, 16-pin SOIC
TC500A	±4.5 to ±7.5	Vss + 1.5V to VDD – 1.5V	Up to 17 bits	4 to 10	1	3-Wire	0 to +70	Differential input range, Programmable resolution/conversion time	16-pin PDIP, 16-pin SOIC
TC510	+4.5 to +5.5	Vss + 1.5V to VDD – 1.5V	Up to 17 bits	4 to 10	1	3-Wire	0 to +70	Differential input range, Programmable resolution/conversion time, Charge pump (–V) output pin	24-pin PDIP, 24-pin SOIC
TC514	+4.5 to +5.5	Vss + 1.5V to VDD – 1.5V	Up to 17 bits	4 to 10	4	3-Wire	0 to +70	Differential input range, Programmable resolution/conversion time, Charge pump (–V) output pin	28-pin PDIP, 28-pin SOIC
TC520A	+4.5 to +5.5	–	–	–	–	Serial port	0 to +70	Optional serial interface adapter for TC500/500A/510/514	14-pin PDIP, 16-pin SOIC
TC7109	±4.5 to ±5.5	Vss + 1.5V to VDD – 1.0V	12 bits plus sign bit	2 to 10	1	Parallel or Serial port	−25 to +85	Differential input range	40-pin PDIP, 44-pin PLCC, 44-pin MQFP
TC7109A	±4.5 to ±5.5	Vss + 1.5V to VDD – 1.0V	12 bits plus sign bit	2 to 10	1	Parallel or Serial port	−25 to +85	Differential input range	40-pin PDIP, 44-pin PLCC, 44-pin MQFP

MIXED SIGNAL: Binary and BCD A/D Converters

Part #	Description	Supply Voltage (V)	Input Voltage Range	Resolution (Digits)	Resolution (Counts)	Max Power (mW)	Data Interface	Temperature Range (°C)	Features	Packages
TC850	Binary A/D	±5	Vss + 1.5V to VDD – 1.5V	15-bit	±32,768	35	8-bit parallel	−25 to +70	Highest conversion speed (40 conv/sec)	44-pin PLCC, 40-pin PDIP
TC14433	BCD A/D	±4.5 to ±8	±199.9 mV to 1.999V	3½	±2,000	20	MUXed BCD	−40 to +85	For DMM, DPM, Data loggers	24-pin SOIC, 24-pin PDIP, 28-pin PLCC
TC14433A	BCD A/D	±4.5 to ±8	±199.9 mV to 1.999V	3½	±2,000	20	MUXed BCD	−40 to +85	For DMM, DPM, Data loggers	24-pin PDIP, 28-pin PLCC

MIXED SIGNAL: Display A/D Converters

Part #	Display Type	Supply Voltage (V)	Resolution (Digits)	Resolution (Counts)	Power (mW)	Temperature Range (°C)	Features	Packages
TC7106	LCD	9	3½	±2,000	10	−25 to +85	For DMM, DPM, Data logger applications	40-pin PDIP, 44-pin PLCC, 44-pin MQFP
TC7106A	LCD	9	3½	±2,000	10	−25 to +85	For DMM, DPM, Data logger applications	40-pin PDIP, 44-pin PLCC, 44-pin MQFP
TC7107	LED	±5	3½	±2,000	10	−25 to +85	For DMM, DPM, Data logger applications	40-pin PDIP, 44-pin PLCC, 44-pin MQFP
TC7107A	LED	±5	3½	±2,000	10	−25 to +85	For DMM, DPM, Data logger applications	40-pin PDIP, 44-pin PLCC, 44-pin MQFP
TC7116	LCD	9	3½	±2,000	10	−25 to +85	Hold function	40-pin PDIP, 44-pin PLCC, 44-pin MQFP
TC7116A	LCD	9	3½	±2,000	10	−25 to +85	Hold function	40-pin PDIP, 44-pin PLCC, 44-pin MQFP
TC7117	LED	±5	3½	±2,000	10	−25 to +85	Hold function	40-pin PDIP, 44-pin PLCC, 44-pin MQFP
TC7117A	LED	±5	3½	±2,000	10	−25 to +85	Hold function	40-pin PDIP, 44-pin PLCC, 44-pin MQFP
TC7126	LCD	9	3½	±2,000	0.5	−25 to +85	Low-power TC7106	40-pin PDIP, 44-pin PLCC, 44-pin MQFP
TC7126A	LCD	9	3½	±2,000	0.5	−25 to +85	Low-power TC7106	40-pin PDIP, 44-pin PLCC, 44-pin MQFP
TC7129	LCD	9	4½	±20,000	4.5	0 to +70	Lowest noise ±3 mV sensitivity	40-pin PDIP, 44-pin PLCC, 44-pin MQFP

MIXED SIGNAL: Digital Potentiometers

Part #	# of Taps	Memory	# per Package	Interface	Resistance (kOhms)	INL (max)	DNL (max)	Temperature Range (°C)	Comments	Packages
MCP4011	64	Volatile	1	Up/Down	2.1, 5, 10, 50	0.5	0.5	−40 to +125	Potentiometer mode	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 DFN
MCP4012	64	Volatile	1	Up/Down	2.1, 5, 10, 50	0.5	0.5	−40 to +125	Rheostat mode	6-pin SOT-23
MCP4013	64	Volatile	1	Up/Down	2.1, 5, 10, 50	0.5	0.5	−40 to +125	Potentiometer to Vss	6-pin SOT-23
MCP4014	64	Volatile	1	Up/Down	2.1, 5, 10, 50	0.5	0.5	−40 to +125	Rheostat to Vss	5-pin SOT-23
MCP4017	128	Volatile	1	I²C™	5, 10, 50, 100	0.5	0.25	−40 to +125	7-bit, Volatile, I²C digital potentiometer	6-pin SC-70
MCP4018	128	Volatile	1	I²C	5, 10, 50, 100	0.5	0.25	−40 to +125	7-bit, Volatile, I²C digital potentiometer	6-pin SC-70
MCP4019	128	Volatile	1	I²C	5, 10, 50, 100	0.5	0.25	−40 to +125	7-bit, Volatile, I²C digital potentiometer	5-pin SC-70
MCP40D17	128	Volatile	1	I²C	5, 10, 50, 100	0.5	0.25	−40 to +125	7-bit, Volatile, I²C digital potentiometer	6-pin SC-70
MCP40D18	128	Volatile	1	I²C	5, 10, 50, 100	0.5	0.25	−40 to +125	7-bit, Volatile, I²C digital potentiometer	6-pin SC-70
MCP40D19	128	Volatile	1	I²C	5, 10, 50, 100	0.5	0.25	−40 to +125	7-bit, Volatile, I²C digital potentiometer	5-pin SC-70
MCP4021	64	Nonvolatile	1	Up/Down	2.1, 5, 10, 50	0.5	0.5	−40 to +125	Potentiometer mode, Shutdown, WiperLock™ Technology	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 DFN
MCP4022	64	Nonvolatile	1	Up/Down	2.1, 5, 10, 50	0.5	0.5	−40 to +125	Rheostat mode, Shutdown, WiperLock Technology	6-pin SOT-23
MCP4023	64	Nonvolatile	1	Up/Down	2.1, 5, 10, 50	0.5	0.5	−40 to +125	Potentiometer to Vss, WiperLock Technology	6-pin SOT-23
MCP4024	64	Nonvolatile	1	Up/Down	2.1, 5, 10, 50	0.5	0.5	−40 to +125	Rheostat to Vss, Shutdown, WiperLock Technology	5-pin SOT-23
MCP4141	128	Nonvolatile	1	SPI	5, 10, 50, 100	0.5	0.25	−40 to +125	Potentiometer mode, Shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 3 × 3 DFN
MCP4142	128	Nonvolatile	1	SPI	5, 10, 50, 100	0.8	0.25	−40 to +125	Rheostat mode, Shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 3 × 3 DFN
MCP4241	128	Nonvolatile	2	SPI	5, 10, 50, 100	0.5	0.25	−40 to +125	Potentiometer mode, Shutdown, WiperLock Technology	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP, 16-pin 4 × 4 QFN
MCP4242	128	Nonvolatile	2	SPI	5, 10, 50, 100	0.8	0.25	−40 to +125	Rheostat mode, Shutdown	10-pin MSOP, 10-pin 3 × 3 DFN
MCP4131	129	Volatile	1	SPI	5, 10, 50, 100	0.5	0.25	−40 to +125	Potentiometer mode, Shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 3 × 3 DFN
MCP41HV31	127	Nonvolatile	1	SPI	5, 10, 50, 100	0.5	0.125	−40 to +125	Nonvolatile digital potentiomer with specified operation from 10V to 36V and SPI interface	14-pin TSSOP, 5 × 5 QFN
MCP4132	129	Volatile	1	SPI	5, 10, 50, 100	0.8	0.25	−40 to +125	Rheostat mode, Shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 3 × 3 DFN
MCP4231	128	Volatile	2	SPI	5, 10, 50, 100	0.5	0.25	−40 to +125	Potentiometer mode, Shutdown, WiperLock Technology	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP, 16-pin 4 × 4 QFN
MCP4232	128	Volatile	2	SPI	5, 10, 50, 100	0.8	0.25	−40 to +125	Rheostat mode, Shutdown	10-pin MSOP, 10-pin 3 × 3 DFN
MCP41010	256	Volatile	1	SPI	10	1	1	−40 to +85	Potentiometer mode, Shutdown	8-pin PDIP, 8-pin SOIC
MCP41050	256	Volatile	1	SPI	50	1	1	−40 to +85	Potentiometer mode, Shutdown	8-pin PDIP, 8-pin SOIC
MCP41100	256	Volatile	1	SPI	100	1	1	−40 to +85	Potentiometer mode, Shutdown	8-pin PDIP, 8-pin SOIC
MCP4151	256	Volatile	1	SPI	5, 10, 50, 100	1	0.5	−40 to +125	Potentiometer mode, Shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 3 × 3 DFN

MIXED SIGNAL: Digital Potentiometers (Continued)

Part #	# of Taps	Memory	# per Package	Interface	Resistance (kOhms)	INL (max)	DNL (max)	Temperature Range (°C)	Comments	Packages
MCP41HV51	255	Nonvolatile	1	SPI	5, 10, 50, 100	1	0.25	−40 to +125	Nonvolatile digital potentiomer with specified operation from 10V to 36V and SPI interface.	14-pin TSSOP, 5 × 5 QFN
MCP4152	256	Volatile	1	SPI	5, 10, 50, 100	1	0.5	−40 to +125	Rheostat mode, Shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 3 × 3 DFN
MCP4161	256	Nonvolatile	1	SPI	5, 10, 50, 100	1	0.5	−40 to +125	Potentiometer mode, Shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 3 × 3 DFN
MCP4162	256	Nonvolatile	1	SPI	5, 10, 50, 100	1	0.5	−40 to +125	Rheostat mode, Shutdown	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin 3 × 3 DFN
MCP42010	256	Volatile	2	SPI	10	1	1	−40 to +85	Potentiometer mode, Shutdown	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP42100	256	Volatile	2	SPI	100	1	1	−40 to +85	Potentiometer mode, Shutdown	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP4251	256	Volatile	2	SPI	5, 10, 50, 100	1	0.5	−40 to +125	Potentiometer mode, Shutdown, WiperLock Technology	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP, 16-pin 4 × 4 QFN
MCP4252	256	Volatile	2	SPI	5, 10, 50, 100	1	0.5	−40 to +125	Rheostat mode, Shutdown	10-pin MSOP, 10-pin 3 × 3 DFN
MCP4261	256	Nonvolatile	2	SPI	5, 10, 50, 100	1	0.5	−40 to +125	Potentiometer mode, Shutdown, WiperLock Technology	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP, 16-pin 4 × 4 QFN
MCP4262	256	Nonvolatile	2	SPI	5, 10, 50, 100	1	0.5	−40 to +125	Rheostat mode, Shutdown	10-pin MSOP, 10-pin 3 × 3 DFN
MCP4341	129	Nonvolatile	4	SPI	5, 10, 50, 100	0.8	0.375	−40 to +125	7-bit, Volatile potentiometer with an SPI interface	20-pin TSSOP, 20-pin 4 × 4 QFN
MCP4342	129	Nonvolatile	4	SPI	5, 10, 50, 100	0.8	0.375	−40 to +125	7-bit, Volatile rheostat with an SPI interface	14-pin TSSOP
MCP4361	257	Nonvolatile	4	SPI	5, 10, 50, 100	1	0.5	−40 to +125	8-bit, Non-volatile potentiometer with an SPI interface	20-pin TSSOP, 20-pin 4 × 4 QFN
MCP4362	257	Nonvolatile	4	SPI	5, 10, 50, 100	1	0.5	−40 to +125	8-bit, Non-volatile rheostat with an SPI interface	14-pin TSSOP
MCP4331	129	Volatile	4	SPI	5, 10, 50, 100	0.8	0.375	−40 to +125	7-bit, Volatile potentiometer with an SPI interface	20-pin TSSOP, 20-pin 4 × 4 QFN
MCP4332	129	Volatile	4	SPI	5, 10, 50, 100	0.8	0.375	−40 to +125	7-bit, Volatile rheostat with an SPI interface	14-pin TSSOP
MCP4351	257	Volatile	4	SPI	5, 10, 50, 100	1	0.5	−40 to +125	8-bit, Non-volatile potentiometer with an SPI interface	20-pin TSSOP, 20-pin 4 × 4 QFN
MCP4352	257	Volatile	4	SPI	5, 10, 50, 100	1	0.5	−40 to +125	8-bit, Non-volatile rheostat with an SPI interface	14-pin TSSOP
MCP4441	129	Nonvolatile	4	I²C	5, 10, 50, 100	0.5	0.25	−40 to +125	Potentiometer mode, WiperLock Technology	20-pin TSSOP, 20-pin 4 × 4 QFN
MCP4442	129	Nonvolatile	4	I²C	5, 10, 50, 101	0.8	0.375	−40 to +125	Rheostat mode, WiperLock Technology	14-pin TSSOP
MCP4461	257	Nonvolatile	4	I²C	5, 10, 50, 102	1	0.5	−40 to +125	Potentiometer mode, WiperLock Technology	20-pin TSSOP, 20-pin 4 × 4 QFN
MCP4462	257	Nonvolatile	4	I²C	5, 10, 50, 103	1	0.5	−40 to +125	Rheostat mode, WiperLock™ Technology	14-pin TSSOP
MCP4531	128	Volatile	1	I²C	5, 10, 50, 100	0.5	0.25	−40 to +125	Potentiometer mode	8-pin MSOP
MCP4631	128	Volatile	2	I²C	5, 10, 50, 100	0.5	0.25	−40 to +125	Potentiometer mode	14-pin TSSOP, 16-pin 4 × 4 QFN
MCP4541	128	Nonvolatile	1	I²C	5, 10, 50, 100	0.5	0.25	−40 to +125	Potentiometer mode, WiperLock Technology	8-pin MSOP
MCP4641	128	Nonvolatile	2	I²C	5, 10, 50, 100	0.5	0.25	−40 to +125	Potentiometer mode, WiperLock Technology	14-pin TSSOP, 16-pin 4x4 QFN
MCP4651	256	Volatile	2	I²C	5, 10, 50, 100	1	0.5	−40 to +125	Potentiometer mode	14-pin TSSOP, 16-pin 4 × 4 QFN
MCP4561	256	Nonvolatile	1	I²C	5, 10, 50, 100	1	0.5	−40 to +125	Potentiometer mode, WiperLock Technology	8-pin MSOP
MCP4661	256	Nonvolatile	2	I²C	5, 10, 50, 100	1	0.5	−40 to +125	Potentiometer mode, WiperLock Technology	14-pin TSSOP, 16-pin 4 × 4 QFN
MCP4532	128	Nonvolatile	1	I²C	5, 10, 50, 100	0.8	0.375	−40 to +125	Rheostat mode	8-pin MSOP, 8-pin 3 × 3 DFN
MCP4632	128	Volatile	2	I²C	5, 10, 50, 100	0.8	0.375	−40 to +125	Rheostat mode	10-pin MSOP, 10-pin 3 × 3 DFN
MCP4542	128	Nonvolatile	1	I²C	5, 10, 50, 100	0.8	0.375	−40 to +125	Rheostat mode, WiperLock Technology	8-pin MSOP, 8-pin 3 × 3 DFN
MCP4552	256	Volatile	1	I²C	5, 10, 50, 100	1	0.5	−40 to +125	Rheostat mode	8-pin MSOP, 8-pin 3 × 3 DFN
MCP4652	256	Nonvolatile	2	I²C	5, 10, 50, 100	1	0.5	−40 to +125	Rheostat mode	10-pin MSOP, 10-pin 3 × 3 DFN
MCP4562	256	Nonvolatile	1	I²C	5, 10, 50, 100	1	0.5	−40 to +125	Rheostat mode, WiperLock Technology	8-pin MSOP, 8-pin 3 × 3 DFN
MCP4662	256	Nonvolatile	2	I²C	5, 10, 50, 100	1	0.5	−40 to +125	Rheostat mode, WiperLock Technology	10-pin MSOP, 10-pin 3 × 3 DFN

MIXED SIGNAL: Frequency-to-Voltage/Voltage-to-Frequency Converters

Part #	Frequency Range (kHz)	Full Scale (ppm FS/°C)	Non-linearity (%FS)	Temperature Range (°C)	Packages
TC9400	100	±40	±0.05	−40 to +85	14-pin PDIP, 14-pin SOIC
TC9401	100	±40	±0.02	−40 to +85	14-pin PDIP, 14-pin SOIC
TC9402	100	±100	±0.25	−40 to +85	14-pin PDIP, 14-pin SOIC

MIXED SIGNAL: D/A Converters

Part #	Resolution (Bits)	DACs per Package	Interface	V_{REF}	Output Settling Time (μs)	DNL (LSB)	Typical Standby Current (μA)	Typical Operating Current (μA)	Temperature Range (°C)	Packages
TC1320	8	1	SMbus	Ext	10	0.8	0.1	350	−40 to +85	8-pin MSOP, 8-pin SOIC
TC1321	10	1	SMbus	Ext	10	2	0.1	350	−40 to +85	8-pin MSOP, 8-pin SOIC
MCP47A1	6	1	I²C™/SMBus	Ext	15	0.5	90	130	−40 to +125	6-pin SC-70
MCP4706	8	1	I²C	Ext	6	0.05	0.06	210	−40 to +125	6-pin SOT-23
MCP4716	10	1	I²C	Ext	6	0.188	0.06	210	−40 to +125	6-pin SOT-23
MCP4725	12	1	I²C	V_{DD}	6	0.75	1	210	−40 to +125	6-pin SOT-23
MCP4726	12	1	I²C	Ext	6	0.75	0.06	210	−40 to +125	6-pin SOT-23
MCP4728	12	4	I²C	Int/V_{DD}	6	0.75	0.04	800	−40 to +125	10-pin MSOP
MCP4801	8	1	SPI	Int	4.5	0.5	0.3	330	−40 to +125	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin DFN
MCP4802	8	2	SPI	Int	4.5	0.5	3.3	415	−40 to +125	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP4811	10	1	SPI	Int	4.5	0.5	0.3	330	−40 to +125	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin DFN
MCP4812	10	2	SPI	Int	4.5	0.5	3.3	415	−40 to +125	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP4821	12	1	SPI	Int	4.5	1	0.3	330	−40 to +125	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin DFN
MCP4822	12	2	SPI	Int	4.5	1	3.3	415	−40 to +125	8-pin PDIP, 8-pin SOIC, 8-pin MSOP
MCP4901	8	1	SPI	Ext	4.5	0.5	3.3	175	−40 to +125	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin DFN
MCP4902	8	2	SPI	Ext	4.5	0.5	0.3	350	−40 to +125	14-pin PDIP, 14-pin SOIC, 14-pinTSSOP
MCP4911	10	1	SPI	Ext	4.5	0.5	3.3	175	−40 to +125	8-pin DFN, 8-pin MSOP, 8-pin PDIP, 8-pin SOIC
MCP4912	10	2	SPI	Ext	4.5	0.5	0.3	350	−40 to +125	14-pin PDIP, 14-pin SOIC, 14-pinTSSOP
MCP4921	12	1	SPI	Ext	4.5	0.75	3.3	175	−40 to +125	8-pin PDIP, 8-pin SOIC, 8-pin MSOP, 8-pin DFN
MCP4922	12	2	SPI	Ext	4.5	0.75	0.3	350	−40 to +125	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP

Note: The analog output is voltage.

INTERFACE

INTERFACE: Controller Area Network (CAN) Products

Part #	Operating Voltage (V)	Temperature Range (°C)	Tx Buffers	Rx Buffers	Filters	Masks	Interrupt Output	Unique Features	Packages
MCP2510[1]	2.7 to 5.5	−40 to +125	3	2	6	2	Yes	CAN 2.0B Active controller with SPI interface to MCU, 3 transmit buffers, 2 receive buffers, HW and SW message triggers	18-pin PDIP, 18-pin SOIC, 20-pin TSSOP
MCP2515	2.7 to 5.5	−40 to +125	3	2	6	2	Yes	MCP2510 pin compatible upgrade with enhanced features including higher throughput and data byte filtering	18-pin PDIP, 18-pin SOIC, 20-pin TSSOP
MCP25020	2.7 to 5.5	−40 to +125	3	2	2	1	N/A	CAN 2.0B Active I/O Expander, Configurable I/O, 2 PWM outputs	14-pin PDIP, 14-pin SOIC
MCP25025	2.7 to 5.5	−40 to +85	3	2	2	1	N/A	CAN 2.0B Active I/O Expander, Configurable I/O, 2 PWM outputs, One-wire CAN option	14-pin PDIP, 14-pin SOIC
MCP25050	2.7 to 5.5	−40 to +125	3	2	2	1	N/A	Mixed-Signal CAN 2.0B Active I/O Expander, Configurable I/O, 4 10-bit ADCs, 2 PWM outputs	14-pin PDIP, 14-pin SOIC
MCP25055	2.7 to 5.5	−40 to +85	3	2	2	1	N/A	Mixed-Signal CAN 2.0B Active I/O Expander, Configurable I/O, 4 10-bit ADCs, 2 PWM outputs, One-wire CAN option	14-pin PDIP, 14-pin SOIC
MCP2551	4.5 to 5.5	−40 to +125	N/A	N/A	N/A	N/A	N/A	High-speed CAN Transceiver (1 Mbps max. CAN bus speed), ISO11898 compatible, Industry standard pinout	8-pin PDIP, 8-pin SOIC
MCP2561	4.5 to 5.5	−40 to +150	N/A	N/A	N/A	N/A	N/A	HS CAN Transceiver; 1 Mbps, ISO11898-5, meets automotive EMC and CAN conformance requirements, MCP2561 = SPLIT Option for common mode stabilization	8-pin PDIP, 8-pin SOIC, 8-pin 3 × 3 DFN
MCP2562	4.5 to 5.5	−40 to +150	N/A	N/A	N/A	N/A	N/A	HS CAN Transceiver; 1 Mbps, ISO11898-5, meets automotive EMC and CAN conformance requirements, MCP2562 = V_{IO} Option for digital I/O level shifting from 1.8V to 5.5V	8-pin PDIP, 8-pin SOIC, 8-pin 3 × 3 DFN
MCP25625	2.7 to 5.5	−40 to +125	3	2	6	2	1	Integrated High-Speed CAN Transceiver and CAN 2.0B Controller	28-pin SSOP, 28-pin 6 × 6 QFN
MCP2561FD	4.5 to 5.5	−40 to +150	N/A	N/A	N/A	N/A	N/A	CAN Flexible Data Rate Transceiver	8-pin PDIP, 8-pin SOIC, 8-pin 3 × 3 DFN
MCP2562FD	4.5 to 5.5	−40 to +150	N/A	N/A	N/A	N/A	N/A	CAN Flexible Data Rate Transceiver	8-pin PDIP, 8-pin SOIC, 8-pin 3 × 3 DFN

Note 1: Not recommended for new designs.

INTERFACE: Infrared Products

Part #	Operating Voltage (V)	Operating Temp. Range (°C)	Max. Baud Rate (Kbaud)	Unique Features	Packages
MCP2120	2.5 to 5.5	−40 to +85	325	UART to IR encoder/decoder with both hardware and software baud rate selection	14-pin PDIP, 14-pin SOIC
MCP2122	1.8 to 5.5	−40 to +85	16× less than clock input	UART to IR encoder/decoder	8-pin PDIP, 8-pin SOIC
MCP2140A	2.0 to 5.5	−40 to +85	9.6	IrDA® Standard protocol handler plus bit encoder/decoder, Fixed baud rate, Low-cost	18-pin PDIP, 18-pin SOIC, 20-pin SSOP
MCP2150	3.0 to 5.5	−40 to +85	115.2	IrDA Standard protocol handler plus bit encoder/decoder on one chip for DTE applications, Programmable ID	18-pin PDIP, 18-pin SOIC, 20-pin SSOP
MCP2155	3.0 to 5.5	−40 to +85	115.2	IrDA Standard protocol handler plus bit encoder/decoder on one chip for DCE applications, Programmable ID	18-pin PDIP, 18-pin SOIC, 20-pin SSOP

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INTERFACE: Ethernet Products

Part #	Description	Interface (Upstream)	Wake-On-LAN	EEE	Industrial Version	Packages
Ethernet Controllers						
ENC28J60	10Base-T Ethernet Controller	SPI	–	–	✓	28-pin SPDIP, SSOP, SOIC, QFN
ENC624J600	10Base-T/100Base-TX Ethernet Controller with Security	SPI/Parallel	–	–	✓	24-pin TQFN, QFN, 64-pin TQFN
LAN9217	10Base-T/100Base-TX Ethernet Controller with 16-bit/MII interface	16-bit Host Bus/MII	–	–	–	100-pin TQFP
LAN9218	10Base-T/100Base-TX Ethernet Controller with 32-bit interface	32-bit Host Bus	–	–	✓	100-pin TQFP
LAN9220	10Base-T/100Base-TX Ethernet Controller with 16-bit interface	16-bit Host Bus	–	–	–	56-pin QFN
LAN9221	10Base-T/100Base-TX Ethernet Controller with 16-bit interface	16-bit Host Bus	–	–	✓	56-pin QFN
LAN9420	10Base-T/100Base-TX Ethernet Controller with 32-bit PCI interface	32-bit PCI 3.0	–	–	✓	128-pin VTQFP
LAN89218	TrueAuto, 10Base-T/100Base-TX Ethernet Controller with 32-bit interface	32-bit Host Bus	–	–	Automotive	100-pin TQFP
Ethernet Switches						
LAN9303	10/100 3-port Managed Ethernet Switches	MII/RMII/Turbo MII	–	–	✓	56-pin QFN
LAN9303M	10/100 3-port Managed Ethernet Switches	MII/RMII/Turbo MII	–	–	✓	72-pin QFN
LAN9311	10/100 2-port Managed Ethernet Switches with Local Bus interface	16-bit Host Bus	–	–	✓	128-pin VTQFP, XVTQFP
LAN9312	10/100 2-port Managed Ethernet Switches with Local Bus interface	32-bit Host Bus	–	–	–	128-pin VTQFP, XVTQFP
LAN9313	10/100 3-port Managed Ethernet Switches	MII/RMII/Turbo MII	–	–	✓	128-pin VTQFP, XVTQFP
LAN89303	TrueAuto, 10/100 3-port Managed Ethernet Switches	MII/RMII/Turbo MII	–	–	Automotive	56-pin QFN
USB to Ethernet						
LAN9500A	USB 2.0 to 10/100 Ethernet Controllers	USB2.0	–	–	✓	56-pin QFN
LAN9730	USB HSIC 2.0 to 10/100 Ethernet Controllers	USB 2.0 (HSIC), MII	–	–	✓	56-pin QFN
LAN7500	USB 2.0 to 10/100/1000 Ethernet Controllers	USB2.0	–	–	✓	56-pin QFN
LAN9512	USB 2.0 to 10/100 Ethernet Controllers with 2-port USB 2.0 Hub	USB2.0	–	–	✓	64-pin QFN
LAN9513	USB 2.0 to 10/100 Ethernet Controllers with 3-port USB 2.0 Hub	USB2.0	–	–	✓	64-pin QFN
LAN9514	USB 2.0 to 10/100 Ethernet Controllers with 4-port USB 2.0 Hub	USB2.0	–	–	✓	64-pin QFN
LAN89530	TrueAuto, USB 2.0 to 10/100 Ethernet Controllers	USB2.0	–	–	Automotive	56-pin QFN
Ethernet Transceivers						
LAN8710A	Small Footprint, Low Power Consumption, Full-Featured 10/100 Ethernet Transceivers	MII/RMII	–	–	✓	32-pin QFN
LAN8720A	Small Footprint, Low Power Consumption, Full-Featured 10/100 Ethernet Transceivers	RMII	–	–	✓	24-pin QFN
LAN8740A	Small-Footprint, 10/100 PHY Family Featuring Energy Efficient Ethernet and Wake-On-LAN	MII/RMII	✓	✓	✓	32-pin QFN
LAN8741A	Small-Footprint, 10/100 PHY Family Featuring Energy Efficient Ethernet	MII/RMII	–	✓	✓	32-pin QFN
LAN8742A	Small-Footprint, 10/100 PHY Family Featuring Wake-On-LAN	RMII	✓	–	✓	24-pin QFN
LAN8810	GMII 10/100/1000 Ethernet Transceiver with HP Auto-MDIX Support	GMII	–	–	✓	72-pin QFN
LAN8820	RGMII 10/100/1000 Ethernet Transceiver with HP Auto-MDIX Support	RGMII	–	–	✓	56-pin QFN
LAN88730	TrueAuto, Small Footprint, Low Power Consumption, Full-Featured 10/100 Ethernet Transceivers	MII/RMII	–	–	Automotive	32-pin QFN

*Note: All products above are supported with 3.3V operating voltage

INTERFACE: Passive Access Products

Part #	Operating Voltage (V)	Operating Temp.Range (°C)	Bus Type	RF Carrier Frequency	Data Format	Features	Packages
MCP2030	1.8 to 3.6	–40 to +85	SPI	125 kHz	NRZ	Three axis signal conditioning devices for passive access applications, High-sensitivity, Configurable smart wake-up filter	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP

INTERFACE: LIN Transceiver Products

Part #	Description	V$_{REG}$ Output Voltage (V)	Operating Temp. Range (°C)	V$_{REG}$ Output Current (mA)	V$_{CC}$ Range (V)	Max Baud Rate	LIN Specification Supported	Packages
MCP2003A	Stand-alone LIN Transceiver (industry standard pinout)	None	–40 to +125	None	6 to 27	20 Kbaud	Revision 1.3, 2.0, 2.1, SAE J2602	8-pin PDIP, 8-pin SOIC, 8-pin 4 × 4 DFN
MCP2004A	Stand-alone LIN Transceiver with TXE/Fault I/O	None	–40 to +125	None	6 to 27	20 Kbaud	Revision 1.3, 2.0, 2.1, SAE J2602	8-pin PDIP, 8-pin SOIC, 8-pin 4 × 4 DFN
MCP2021A	LIN Transceiver with integrated V$_{REG}$	5.0 ± 3%, 3.3 ± 3%	–40 to +125	70	6 to 18	20 Kbaud	Revision 1.3, 2.0, 2.1, SAE J2602	8-pin PDIP, 8-pin SOIC, 8-pin 4 × 4 DFN
MCP2022A	LIN Transceiver with integrated V$_{REG}$, RESET pin	5.0 ± 3%, 3.3 ± 3%	–40 to +125	70	6 to 18	20 Kbaud	Revision 1.3, 2.0, 2.1, SAE J2602	14-pin PDIP, 14-pin SOIC, 14-pin TSSOP
MCP2025	LIN Transceiver with integrated V$_{REG}$	5.0 ± 3%, 3.3 ± 3%	–40 to +125	70	6 to 18	20 Kbaud	Revision 2.0	8-pin PDIP, 8-pin SOIC, 8-pin 4 × 4 DFN
MCP2050	LIN Transceiver with integrated V$_{REG}$, WWDT	5.0 ± 3%, 3.3 ± 3%	–40 to +125	70	6 to 18	20 Kbaud	Revision 1.3, 2.0, 2.1, SAE J2602	14-pin PDIP, 14-pin SOIC, 20-pin QFN

INTERFACE: Serial Peripherals

Part #	Description	Operating Voltage (V)	Operating Temp. Range (°C)	Bus Type	Max. Bus Frequency (kHz)	Features	Packages
MCP23008	8-bit I/O Port Expander	1.8 to 5.5	–40 to +85	I²C™	1700	3 HW address pins, HW interrupt, 25 mA source/sink capability per I/O	18-pin PDIP, 18-pin SOIC, 20-pin SSOP, 20-pin 4 × 4 QFN
MCP23S08	8-bit I/O Port Expander	1.8 to 5.5	–40 to +85	SPI	10000	2 HW address pins, HW interrupt, 25 mA source/sink capability per I/O	18-pin PDIP, 18-pin SOIC, 20-pin SSOP, 20-pin 4 × 4 QFN
MCP23009	8-bit I/O Port Expander	1.8 to 5.5	–40 to +125	I²C	3400	1 HW address pin, HW interrupt, 25 mA source/sink per I/O, 100 kHz, 400 kHz and 3.4 MHz I²C™ supported	18-pin PDIP, 18-pin SOIC, 20-pin SSOP
MCP23S09	8-bit I/O Port Expander	1.8 to 5.5	–40 to +125	SPI	10000	HW interrupt, 25 mA source/sink per I/O	18-pin PDIP, 18-pin SOIC
MCP23016	16-bit I/O Port Expander	2.0 to 5.5	–40 to +85	I²C	400	3 HW address inputs, HW interrupt, 25 mA source/sink capability per I/O	28-pin PDIP, 28-pin SOIC, 28-pin SSOP, 28-pin 6 × 6 QFN
MCP23017	16-bit I/O Expander	1.8 to 5.5	–40 to +125	I²C	1700	3 HW address pins, 25 mA sink/source per I/O, 100 kHz, 400 kHz and 3-4 MHz I²C supported, Interrupt output	28-pin PDIP, 28-pin SOIC, 28-pin SSOP, 28-pin QFN
MCP23S17	16-bit I/O Expander	1.8 to 5.5	–40 to +125	SPI	10000	3 HW address pins, 25 mA sink/source per I/O, Interrupt output	28-pin PDIP, 28-pin SOIC, 28-pin SSOP, 28-pin QFN
MCP23018	16-bit I/O Port Expander	1.8 to 5.5	–40 to +125	I²C	3400	1 HW address pin, 2 HW interrupts, 25 mA source/sink per I/O, 100 kHz, 400 kHz and 3.4 MHz I²C supported	24-pin SSOP, 28-pin SOIC, 28-pin SDIP
MCP23S18	16-bit I/O Port Expander	1.8 to 5.5	–40 to +125	SPI	10000	2 HW interrupts, 25 mA source/sink per I/O	28-pin SOIC, 28-pin SDIP

INTERFACE: IEEE 802.11™ Modules

Part #	Pin Count	Antenna	Frequency Range (GHz)	Sensitivity (dBm)	Power Output (dBm)	RSSI	Tx Power Consumption (mA)	Rx Power Consumption (mA)	Clock (MHz)	Sleep	MAC	MAC Features	Protocols	Encryption	Interface	Packages
MRF24WB0MA	36	PCB	2.412–2.484	–91	+10	Yes	154	85	25	0.1 µA[1]	Yes	802.11b, long range, low power	Wi-Fi® Connection Manager, Announce, DNS, DDNS, DHCP, FTP, HTTP, NBNS, SNMP, SNTP, SSL, TCP, UDP, ZeroConf[2]	WPA2-PSK, WPA-PSK, WEP	4-wire SPI	36/Module
MRF24WB0MB	36	U.FL	2.412–2.484	–91	+10	Yes	154	85	25	0.1 µA[1]	Yes	802.11b, long range, low power	Wi-Fi Connection Manager, Announce, DNS, DDNS, DHCP, FTP, HTTP, NBNS, SNMP, SNTP, SSL, TCP, UDP, ZeroConf[2]	WPA2-PSK, WPA-PSK, WEP	4-wire SPI	36/Module
MRF24WG0MA	36	PCB	2.412–2.484	–95	+18	Yes	240	156	25	0.1 mA[1]	Yes	802.11b/g, Wi-Fi Direct, SoftAP, WPS	Wi-Fi Connection Manager, Announce, DNS, DDNS, DHCP, FTP, HTTP, NBNS, SNMP, SNTP, SSL, TCP, UDP, ZeroConf[2]	WPA2-PSK, WPA-PSK, WEP, WPA2-Enterprise	4-wire SPI	36/Module
MRF24WG0MB	36	U.FL	2.412–2.484	–95	+18	Yes	240	156	25	0.1 mA[1]	Yes	802.11b/g, Wi-Fi Direct, SoftAP, WPS	Wi-Fi Connection Manager, Announce, DNS, DDNS, DHCP, FTP, HTTP, NBNS, SNMP, SNTP, SSL, TCP, UDP, ZeroConf[2]	WPA2-PSK, WPA-PSK, WEP, WPA2-Enterprise	4-wire SPI	36/Module
RN171	49	RF PAD	2.412–2.484	–83	0 to +12	Yes	190 (+12 dBm)	38	44	4 µA	Yes	802.11b/g, SoftAP, WPS, Webscan	DHCP, DNS, ARP, ICMP, FTP client, HTTP client, TCP, UDP	WEP, WPA, WPA2, EAP	UART	49/Module
RN131	44	Chip, U.FL	2.412–2.484	–85	+18	Yes	210 (+18 dBm)	40	44	4 µA	Yes	802.11b/g, SoftAP, WPS, Webscan	DHCP, DNS, ARP, ICMP, FTP client, HTTP client, TCP, UDP	WEP, WPA, WPA2, EAP	UART	44/Module
RN171XV	49	Wire, U.FL, SMA	2.412–2.484	–83	0 to +12	Yes	190 (+12 dBm)	38	44	4 µA	Yes	802.11b/g, SoftAP, WPS, Webscan	DHCP, DNS, ARP, ICMP, FTP client, HTTP client, TCP, UDP	WEP, WPA, WPA2, EAP	UART	2 × 10 (2 mm) Through hole module

Note 1: Indicates "off" current
Note 2: Supported in the provided stack

INTERFACE: Bluetooth® Modules

Part #	Module Type	Pin Count	Frequency Range (GHz)	Sensitivity (dBm)	Power Output (dBm)	Power Consumption	Sleep	MAC	Profiles	Interface	Packages
RN4020	Bluetooth Low Energy Module	24	2.412–2.484	−92.5	+7 (avg)	Idle < 1.5 mA, Tx/Rx active 16 mA at 0 dBm	Dormant < 700 nA, Deep Sleep < 5.0 µA	Yes	GAP, GATT, SM, L2CAP, Integrated Public Profiles	UART, PIO, AIO, SPI	24/Module
RN41	Data	35	2.412–2.484	−80	15	Standby/Idle 25 mA, Connected (normal mode) 30 mA, Connected (low power Sniff) 8 mA	Standby/Idle (Deep sleep enabled) 250 µA	Yes	SPP, DUN, HID, iAP, HCI, RFCOMM, L2CAP, SDP	UART, USB, Bluetooth	35/Module
RN42	Data	35	2.412–2.484	−80	4	Standby/Idle 25 mA, Connected (normal mode) 3 mA, Connected (low power Sniff) 8 mA	Standby/Idle (Deep sleep enabled) 26 µA	Yes	SPP, DUN, HID, iAP, HCI, RFCOMM, L2CAP, SDP	UART, USB, Bluetooth	35/Module
RN52	Audio	50	2.412–2.484	−85	4	Idle 12 mA, Connected A2DP 26 mA, HFP/HSP 23.5 mA	N/A	Yes	A2DP, AVRCP, HFP, HSP, SPP, iAP	UART, USB, Bluetooth, GPIO	50/Module
RN41XV	Data	35	2.412–2.484	−80	15	Standby/Idle 25 mA, Connected (normal mode) 30 mA, Connected (low power Sniff) 8 mA	Standby/Idle (Deep sleep enabled) 250 µA	Yes	SPP, DUN, HID, iAP, HCI, RFCOMM, L2CAP, SDP	UART, USB, Bluetooth	2 × 10 (2 mm) Through hole module
RN42XV	Data	35	2.412–2.484	−80	4	Standby/Idle 25 mA, Connected (normal mode) 3 mA, Connected (low power Sniff) 8 mA	Standby/Idle (Deep sleep enabled) 26 µA	Yes	SPP, DUN, HID, iAP, HCI, RFCOMM, L2CAP, SDP	UART, USB, Bluetooth	2 × 10 (2 mm) Through hole module

INTERFACE: IEEE 802.15.4 ZigBee® RF Transceiver Products

Part #	Pin Count	Frequency Range (GHz)	Sensitivity (dBm)	Power Output (dBm)	RSSI	Tx Power Consumption (mA)	Rx Power Consumption (mA)	Clock (MHz)	Sleep	MAC	MAC Features	Encryption	Interface	Packages
MRF24J40	40	2.405 to 2.48	−95	0	Yes	23	19	20	2 µA	Yes	CSMA-CA	AES128	4-wire SPI	40-pin QFN
MRF24J40MA	12	2.405 to 2.48	−94	0	Yes	23	19	20	2 µA	Yes	CSMA-CA	AES128	4-wire SPI	12/Module
MRF24J40MC	12	2.405 to 2.48	−108	+19	Yes	120	25	20	12 µA	Yes	CSMA-CA	AES128	4-wire SPI	12/Module
MRF24J40MD	12	2.405 to 2.48	−102	+20	Yes	130	25	20	5 µA	Yes	CSMA-CA	AES128	4-wire SPI	12/Module
MRF24XA	32	2.405 to 2.48	−103	0	Yes	25	13.5	16	0.04 µA	Yes	CSMA-CA	AES128	4-wire SPI	32-pin QFN

INTERFACE: Sub-GHz Transceivers

Part #	Pin Count	Frequency Range (MHz)	Sensitivity (dBm)	Power Output (dBm)	RSSI	Tx Power Consumption (mA)	Rx Power Consumption (mA)	Clock (MHz)	Sleep	Interface	Packages
MRF49XA	16	433/868/915	−110	+7	Yes	15 mA @ 0 dBm	11	10 MHz	0.3 µA	4-wire SPI	16-pin TSSOP
MRF89XA	32	868/915/950	−113	+12.5	Yes	25 mA @ +10 dBm	3	12.8 MHz	0.1 µA	4-wire SPI	32-pin TQFN
MRF89XAM8A	12	868	−113	+12.5	Yes	25 mA @ +10 dBm	3	12.8 MHz	0.1 µA	4-wire SPI	12/Module
MRF89XAM9A	12	915	−113	+12.5	Yes	25 mA @ +10 dBm	3	12.8 MHz	0.1 µA	4-wire SPI	12/Module

INTERFACE: Sub-GHz Transmitters

Part #	Pin Count	Frequency Range (MHz)	Program Memory (Bytes)	EEPROM (bytes)	RAM (bytes)	Digital Timer	Watch Dog Timer	Max. Speed (MHz)	ICSP	Modulation	Data Rate (kbps)	Output Power (dBm)	Operating Voltage (V)	Packages
PIC12F529T39A	6	310–928	2.3K	64	201	1	1	8	Yes	OOK/FSK	100	10	2.0–3.7	14-pin TSSOP
PIC12LF1840T39A	6	310–928	7.1K	256	256	2	1	32	Yes	OOK/FSK	100	10	1.8–3.6	14-pin TSSOP
PIC16LF1824T39A	20	310–928	4K	256	256	1	1	32	Yes	OOK/FSK	100	10	1.8–3.6	20-pin TSSOP
rfPIC12F675F	6	380–450	1.7K	128	64	1	1	20	Yes	ASK/FSK	40	10	2.0–5.5	20-pin SSOP
rfPIC12F675H	6	850–930	1.7K	128	64	1	1	20	Yes	ASK/FSK	40	10	2.0–5.5	20-pin SSOP
rfPIC12F675K	6	290–350	1.7K	128	64	1	1	20	Yes	ASK/FSK	40	10	2.0–5.5	20-pin SSOP

INTERFACE: USB Bridge Devices

Part #	USB Speed	USB Compliant	PHY	MCU Interface	Tx/Rx Buffer Size (bytes)	Number of GPIO	Operating Voltage (V)	Packages
MCP2200	Full-Speed USB (12 Mb/s), Low-Speed USB (1.5 Mb/s)	Yes	Yes	UART	128/128	8	2.7 to 5.5	20-pin SOIC, 20-pin TSSOP, 20-pin QFN
MCP2210	Full-Speed USB (12 Mb/s), Low-Speed USB (1.5 Mb/s)	Yes	Yes	SPI	64	9	3.3 to 5.5	20-pin SOIC, 20-pin TSSOP, 20-pin QFN
MCP2221	Full-Speed USB (12 Mb/s), Low-Speed USB (1.5 Mb/s)	Yes	Yes	I²C™	64	4	3.0 to 5.5	14-pin PDIP, 14-pin SOIC< 14-pin TSSOP, 16-pin QFN

INTERFACE: USB Products

Part #	Description	Processor Interface	# of Downstream Ports	Card Formats	Industrial Version	Packages
USB Hub Controllers						
USB2412	2-Port USB 2.0 Hi-Speed Hub	USB 2.0	2	–	–	28-pin QFN
USB2422	Small-footprint, 2-Port value hub, commercial and industrial temperature with USB battery charging 1.1	USB 2.0	2	–	✓	24-pin QFN
USB251XB	USB 2.0 Hi-Speed Hub w/Battery Charger Detection	USB 2.0	2, 3, 4, 7 port options	–	Automotive	36 or 64-pin QFN
USB2524	4-Port USB 2.0 Hi-Speed Multi-Switch Hub	USB 2.0 × 2	4	–	–	56-pin QFN
USB3503A	3-Port USB 2.0 Hi-Speed HSIC Hub for Mobile Applications	HSIC	3	–	✓	25-ball WLCSP
USB3803B	3-Port USB 2.0 Hi-Speed Hub for Mobile Applications	USB 2.0	3	–	✓	25-ball WLCSP
USB553XB	USB 3.0 SuperSpeed Hub w/Battery Charger Detection	USB 3.0	4, 7 port options	–	✓	64 or 72-pin QFN
USB3X13	3-Port USB 2.0 Hi-Speed Controller Hub for Mobile Applications	USB 2.0 or HSIC	3 (USB 2.0 ×2/ HSIC ×1)	–	✓	30-ball WLCSP
USB253X	USB 2.0 Hi-Speed Controller Hub w/Battery Charger Detection	USB 2.0	2, 3, 4 port options	–	✓	36-pin QFN
USB46X4	USB 2.0 Hi-Speed Controller Hub w/USB and HSIC Interfaces	USB 2.0 or HSIC	4 (USB 2.0 ×4 or USB 2.0 ×2/ HSIC ×2)	–	✓	48-pin QFN
USB Power and Charging						
UCS1001	USB Port Power Controller with Charger Emulation	USB 2.0	–	–	✓	20-pin QFN
UCS1002	Programmable USB Port Power Controller with Charger Emulation	USB 2.0	–	–	✓	20-pin QFN
USB Transceivers/Switches						
USB333X	Mobile Hi-Speed USB 2.0 Transceiver with Multi-frequency Support	ULPI	–	–	✓	25-ball WLCSP
USB3340	Hi-Speed USB 2.0 Transceiver with Multi-frequency Support	ULPI	–	–	Automotive	24 or 32-pin QFN
USB3320	Hi-Speed USB 2.0 Transceiver with Multi-frequency Support	ULPI	–	–	Automotive	32-pin QFN
USB3300	Hi-Speed USB 2.0 Transceiver (24 Mhz reference clock support)	ULPI	–	–	✓	32-pin QFN
USB3740B	Hi-Speed USB 2.0 Switch with Extremely Low Power	USB 2.0	–	–	✓	10-pin QFN
USB375XA-X	Hi-Speed USB 2.0 Port Protection with Switch and Charger Detection	USB 2.0	–	–	✓	16-pin QFN
USB Flash Media Controllers						
USB224X	Hi-Speed USB 2.0 Multi-Format Flash Media Controller	USB 2.0	–	SD™/MMC/eMMC™/MS/xD	✓	36-pin QFN
USB225X	Hi-Speed USB 2.0 Multi-Format Flash Media Controller	USB 2.0	–	SD/MMC/eMMC/MS/xD/CF	✓	128-pin VTQFP
USB264X	Hi-Speed USB 2.0 Multi-Format Flash Media Hub Controller	USB 2.0	2	SD/MMC/eMMC/MS/xD	Automotive	48-pin QFN
USB2660	Hi-Speed USB 2.0 Multi-Format Flash Media Hub Controller	USB 2.0	2	SD/MMC/eMMC/MS/xD (×2)	✓	64-pin QFN
USB4640	Hi-Speed USB 2.0 Multi-Format Flash Media HSIC Hub Controller	HSIC	2	SD/MMC/eMMC/MS/xD	✓	48-pin QFN
USB Security						
SEC1110	Smart Card Controller	USB 2.0	–	–	✓	16-pin QFN
SEC1210	Smart Card Controller with Multi-Interface Support	USB 2.0	–	–	✓	24 or 48-pin QFN

SAFETY AND SECURITY

SAFETY AND SECURITY: Photoelectric Smoke Detector ICs

Part #	Horn Driver Alarm Pattern	Alarm Memory	Low Battery Detection	Chamber Test	Alarm Interconnect	Sensitivity Timer	Internal POR	Alternate Diagnostic Mode	Operating Temp. Range (°C)	Packages
RE46C140	NFPA Temporal	No	Yes	Yes	Yes	Yes	Yes	–	−25 to +75	16-pin PDIP, 16-pin SOIC
RE46C141	NFPA Temporal	No	Yes	Yes	Yes	–	Yes	–	−25 to +75	16-pin PDIP, 16-pin SOIC
RE46C143	Continuous Tone	No	Yes	Yes	Yes	–	Yes	–	−25 to +75	16-pin PDIP, 16-pin SOIC
RE46C144	Continuous Tone	No	Yes	Yes	Yes	Yes	Yes	–	−25 to +75	16-pin PDIP, 16-pin SOIC
RE46C145	NFPA Temporal	No	Yes	Yes	Yes	Yes	Yes	Yes	−25 to +75	16-pin PDIP, 16-pin SOIC
RE46C165	NFPA Temporal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	−25 to +75	16-pin PDIP, 16-pin SOIC
RE46C166	Continuous Tone	Yes	Yes	Yes	Yes	Yes	Yes	Yes	−25 to +75	16-pin PDIP, 16-pin SOIC
RE46C167	NFPA Temporal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	−25 to +75	16-pin PDIP, 16-pin SOIC
RE46C168	Continuous Tone	Yes	Yes	Yes	Yes	Yes	Yes	Yes	−25 to +75	16-pin PDIP, 16-pin SOIC
RE46C190	NFPA Temporal or Continuous Tone	Yes	Yes	Yes	Yes	Yes	Yes	–	−10 to +60	16-pin SOIC

SAFETY AND SECURITY: Ionization Smoke Detector ICs

Part #	Horn Driver Alarm Pattern	Alarm Memory	Low Battery Detection	Reverse Battery Protection	Alarm Interconnect	Hush Timer	Power-up Low Battery Test	Operating Temp. Range (°C)	Packages
RE46C120	NFPA Temporal or Continuous Tone	No	Yes	Yes	–	–	–	−10 to +60	16-pin PDIP
RE46C121	NFPA Temporal	No	Yes	Yes	Yes	–	–	−10 to +60	16-pin PDIP
RE46C122	NFPA Temporal	No	Yes	Yes	Yes	Yes	Yes	−10 to +60	16-pin PDIP
RE46C126	Continuous Tone	No	Yes	Yes	Yes	–	–	−10 to +60	16-pin PDIP
RE46C127	Continuous Tone	No	Yes	Yes	Yes	Yes	Yes	−10 to +60	16-pin PDIP
RE46C128	NFPA Temporal	No	Yes	Yes	Yes	–	Yes	−10 to +60	16-pin PDIP
RE46C129	Continuous Tone	No	Yes	Yes	Yes	–	Yes	−10 to +60	16-pin PDIP
RE46C152	NFPA Temporal or Continuous Tone	No	Yes	Yes	Yes	Yes	Yes	−10 to +60	16-pin PDIP
RE46C162	NFPA Temporal or Continuous Tone	Yes	Yes	Yes	Yes	Yes	Yes	−10 to +60	16-pin PDIP
RE46C163	NFPA Temporal or Continuous Tone	Yes	Yes	Yes	Yes	Yes	Yes	−10 to +60	16-pin PDIP
RE46C180	NFPA Temporal or Continuous Tone	Yes	Yes	No	Yes	Yes	Yes	−10 to +60	16-pin PDIP, 16-pin SOIC

SAFETY AND SECURITY: Ionization Smoke Detector Front Ends

Part #	Microprocessor Compatible Output	Output Options	Typical Application	Operating Temperature Range (°C)	Packages
RE46C112	Yes	V_{OUT} 1/4 of V_{DD} or V_{OUT} 1/4 of Detect Input	3V or 3.3V Microprocessor	−10 to +60	8-pin PDIP
RE46C114	Yes	V_{OUT} 1/2 of V_{DD} or V_{OUT} 1/2 of Detect Input	5V Microprocessor	−10 to +60	8-pin PDIP
RE46C311	Yes	Op Amp	Ionization Smoke Detector Front End	−10 to +60	8-pin PDIP, 8-pin SOIC
RE46C312	Yes	Op Amp	Ionization Smoke Detector Front End	−10 to +60	8-pin PDIP, 8-pin SOIC

SAFETY AND SECURITY: CO Detectors

Part #	Operating Voltage (Vdc)	Voltage Regulator (Vdc)	LED Driver	Horn Driver	Interconnect	Low Battery Detection	Brown Out	Boost Regulator	Op Amp Vos Max (µV)	Op Amp Ib Max (pA)	Op Amp GBWP (kHz)	Op Amp Aol (dB)	Op Amp Slew Rate (V/µS)	Op Amp Unity Gain Stable	Op Amp CMRR Min (dB)	Op Amp Rail-to-Rail	Operating Temp. Range (°C)
RE46C800	2 to 12	3.3	Yes	Yes	Yes	Yes	Yes	Yes	1000	200	10	115	0.003	Yes	80	In/Out	−10 to +60

SAFETY AND SECURITY: Piezoelectric Horn Drivers

Part #	Operating Voltage (V)	LED Driver	Voltage Regulator (V)	Low Battery Detection	Interconnect	Power good	Operating Temp. Range (°C)	Packages
RE46C100	6 to 16	–	–	–	–	–	−40 to +85	8-pin PDIP, 8-pin SOIC
RE46C101	6 to 16	Yes	–	–	–	–	−40 to +85	8-pin PDIP, 8-pin SOIC
RE46C104	4 to 8	–	–	–	–	–	0 to +50	14-pin PDIP, 14-pin SOIC
RE46C105	6 to 12	Yes	3.3 or 5	Yes	–	–	−40 to +85	14-pin PDIP, 14-pin SOIC
RE46C107	2 to 5	Yes	3 or 3.3	Yes	–	–	0 to +50	16-pin PDIP, 16-pin SOIC
RE46C108	6 to 12	–	3.3 or 5	–	–	–	−40 to +85	8-pin PDIP, 8-pin SOIC
RE46C109	6 to 12	–	3	Yes	Yes	Yes	−40 to +85	16-pin PDIP, 16-pin SOIC
RE46C117	2 to 5	–	–	–	–	–	0 to +50	8-pin PDIP, 8-pin SOIC
RE46C119	6 to 12	–	3	Yes	Yes	Yes	−40 to +85	16-pin PDIP, 16-pin SOIC
RE46C317	2 to 5	–	–	–	–	–	−10 to +60	8-pin PDIP, 8-pin SOIC
RE46C318	2 to 5	–	–	–	–	–	−10 to +60	8-pin PDIP, 8-pin SOIC

Analog Design Development Tools

Order #	Description	Devices Supported
Evaluation, Demonstration and Development Kits		
Order #	Description	Devices Supported
Thermal Management Demonstration and Evaluation Tools		
ADM00345	MTD6505 3-Phase BLDC Sensorless Fan Controler Demonstration Board	MTD6505
ADM00425	MCP3910 ADC Evaluation Board for 16-bit MCUs	
ADM00516	EMC1182 Temperature Sensor Evaluation Board	EMC1182
ADM00557	MCP8024 TQFP BLDC Motor Driver Evaluation Board	MCP8024
ADM00575	MCP8063 12V 3-Phase BLDC Sensorless Fan Controller Demo Kit	MCP8063
MCP9700DM-PCTL	MCP9700 Temperature-to-Voltage Converter PICtail™ Demonstration Board	MCP9800
MCP9700DM-TH1	MCP9700 Thermistor Demonstration Board	MCP9700, MCP6S92
MCP9800DM-PCTL	MCP9800 Temperature Sensor PICtail Demonstration Board	MCP9800
MCP9800DM-TS1	MCP9800 Temperature Sensor Demonstration Board	MCP9800
MCP9800DM-DL	MCP9800 Temperature Data Logger Demonstration Board	MCP9800
MCP9800DM-DL2	MCP9800 Temperature Data Logger Demonstration Board 2	MCP9800, MCP101, PIC10F202, 24LC16B
TC1047ADM-PICTL	TC1047A Temperature-to-Voltage Converter PICtail Demonstration Board	TC1047A
TC642DEMO	TC64X/64XB Fan Speed Controller Demonstration Board	TC642, TC646, TC647, TC648, TC649
TC650DEMO	TC650 Fan Controller Demonstration Board	TC650
TC652DEMO	TC652 Fan Controller Demonstration Board	TC652
TC72DM-PICTL	TC72 Digital Temperature Sensor PICtail Demonstration Board	TC72
TC74DEMO	TC74 Serial Digital Thermal Sensor Demonstration Board	TC74
TC77DM-PICTL	TC77 Thermal Sensor PICtail Demonstration Board	TC77
TMPSNS-RTD1	PT100 RTD Evaluation Board	MCP6S26, MCP3301, MCP6024, MCP41010, PIC18F2550, TC1071, MCP6002
TMPSNSRD-RTD2	RTD Reference Design Board	MCP3551, MCP9804
TMPSNSRD-TCPL1	Thermocouple Reference Design	MCP9804, MCP3421
EVB-EMC1043	EMC1043 Evaluation Board	EMC1043
EVB-EMC1043C	EMC1043 Evaluation Board with External Diode Off-Board Cable	EMC1043
EVB-EMC1412	EMC1412 Evaluation Board	EMC1412
EVB-EMC14xx	EMC1412 Evaluation Board	EMC1412, EMC1413, EMC1414
EVB-EMC2101	EMC2101 Evaluation Board	EMC2101
EVB-EMC2103-1	EMC2103-1 Evaluation Board	EMC2103-1
Mixed Signal Demonstration and Evaluation Tools		
ADM00310	MCP3903 ADC Evaluation Board for 16-bit MCUs	MCP3903, MCP2200, PIC24, dsPIC33
ADM00317	MCP47X6 PICtail Plus Daughter Board	MCP4726, MCP4716, MCP4706
ADM00333	PIC18F87J72 Evaluation Board	PIC18F87J72
ADM00398	MCP3911 ADC Evaluation Board for 16-bit MCUs	MCP3911
ADM00522	MCP3913 Evaluation Board	MCP3913
ARD00280	PIC18F87J72 Single Phase Energy Meter Reference Design	N/A
ARD00330	PIC18F87J72 Energy Monitoring PICtail Plus Daughter Board	N/A
ARD00342	MCP3901 and PIC18F65J90 Shunt Meter Reference Design	MCP3901, PIC18F65J90
ARD00385	MCP3911 and PIC18F85K90 Single-Phase Anti-Tamper Energy Meter	MCP3911
ARD00455	MCP39F501 Energy Metering and Power Monitoring Demonstration Board	MCP39F501
ARD00523	MCP3914 Evaluation Board	MCP3914
DV3201A	MCP3XXX Single/Dual ADC MXDEV® Daughter Board	MCP3001, MCP3002, MCP3201, MCP3202
DV3204A	MCP3204/08 MXDEV Daughter Board	MCP3004, MCP3008, MCP3204, MCP3208
DV42XXX	MCP42XXX Digital Potentiometer Evaluation Board	MCP42010, MCP42050, MCP42100
DVMCPA	MXDEV Analog Evaluation System	MCP3001/02, MCP3004/08, MCP3201/08, MCP3204/08

Analog Design Development Tools

Evaluation, Demonstration and Development Kits		
Order #	Description	Devices Supported
Mixed Signal Demonstration and Evaluation Tools (Continued)		
MCP2030DM-TPR	MCP2030 Bidirectional Communications Demonstration Kit	MCP2030, MCP3421, PIC16F636, TC4421, PIC18F4680
MCP3221DM-PCTL	MCP3221 PICtail Demonstration Board	MCP3221
MCP3421EV	MCP3421 SOT-23-6 Evaluation Board	MCP3421
MCP3421DM-BFG	MCP3421 Battery Fuel Gauge Demonstration Board	MCP3421, MCP73831, MCP1702, PIC18F4550
MCP3421DM-WS1	MCP3421 Weight Scale Demonstration Board	MCP3421, MCP6V07, PIC18F4550
MCP3422EV	MCP3422 Evaluation Board	MCP3422
MCP3423EV	MCP3423 Evaluation Board	MCP3423
MCP3424EV	MCP3424 Evaluation Board	MCP3424
MCP3425EV	MCP3425 SOT 23-6 Evaluation Board	MCP3425
MCP3551DM-PCTL	MCP3551 Delta-Sigma ADC Demonstration Board	MCP3551
MCP355XDV-MS1	MCP355X Sensor Application Developer's Board	MCP3551, MCP3553, MCP3550-50, MCP3550-60
MCP355XDM-TAS	MCP355X Tiny Application Sensor Demonstration Board	MCP3551, MCP3553, MCP3550-50, MCP3550-60
MCP3901EV-MCU16	MCP3901 ADC Evaluation Board for 16-bit MCUs	MCP3901, PIC24F, PIC24H, dsPIC33, PIC18F86J55
MCP3905EV	MCP3905 Energy Meter Evaluation Board	MCP3905
MCP3905RD-PM1	MCP3905 Energy Meter Reference Design	MCP3905
MCP3909EV-MCU16	MCP3909 ADC Evaluation Board for 16-bit MCUs	MCP3909
MCP3909RD-3PH1	MCP3909 3-Phase Energy Meter Reference Design	MCP3909, PIC18F2520, PIC18F4550
MCP3909RD-3PH3	MCP3909 and dsPIC33F 3-Phase Energy Meter Reference Design	MCP3909, dsPIC33FJ128GP706
MCP401XEV	MCP401X Evaluation Board	MCP40D18, MCP4017, MCP4018, MCP4019, MCP40D17, MCP40D19
MCP4XXXDM-DB	MCP4XXX Digital Potentiometer Daughter Board	MCP4011, MCP4021, MCP42XXX
MCP402XEV	MCP402X Non-Volatile Digital Potentiometer Evaluation Board	MCP4021, MCP4022, MCP4023, MCP4024
MCP42XXDM-PTPLS	MCP42XX PICtail Plus Daughter Board	MCP4231, MCP4232, MCP4241, MCP4242, MCP4251, MCP4252, MCP4261, MCP4262
MCP42XXEV	MCP42XX Evaluation Board	MCP4231, MCP4241, MCP4251, MCP4261
MCP43XXEV	MCP43XX Evaluation Board	MCP4331, MCP4341, MCP4351, MCP4361
MCP46XXDM-PTPLS	MCP46XX PICtail Plus Daughter Board	MCP4631, MCP4641, MCP4651, MCP47652, MCP4661, MCP4662
MCP46XXEV	MCP46XX Evaluation Board	MCP4631, MCP4641, MCP4651, MCP4661
MCP4725EV	MCP4725 SOT 23-6 Evaluation Board	MCP4725
MCP4725DM-PTPLS	MCP4725 PICtail Plus Daughter Board	MCP4725
MCP4728EV	MCP4728 Quad DAC Evaluation Board	MCP4728
MXSIGDM	Mixed Signal PICtail Demonstration Board	TC132X, MCP330X, MCP320X, MCP482X, MCP492X, MCP3221, MCP3021, MCP1525
EVB-EMC1701	EMC1701 Evaluation Board	EMC1701-1, EMC1701-2
EVB-PAC1710	PAC1710 Evaluation Board	PAC1710
EVB-PAC1720	PAC1720 Evaluation Board	PAC1720

Analog Design Development Tools

Evaluation, Demonstration and Development Kits		
Order #	**Description**	**Devices Supported**
Power Management Demonstration and Evaluation Tools		
ADM00360	MCP16301 High Voltage Buck Converter 300 mA D2PAK Demo Board	MCP16301
ADM00399	MCP16301 High Voltage Buck-Boost Demonstration Board	MCP16301
ADM00414	MCP16321 Evaluation Board	MCP16321
ADM00423	MCP16322 Evaluation Board	MCP16321, MCP16322
ADM00427	MCP16323 Evaluation Board	MCP16321, MCP16322, MCP16323
ADM00433	MCP16301 5V/600 mA Low Noise Evaluation Board	MCP16301
ADM00434	MCP19035 300 KHz Synchronous Buck Controller Evaluation Board	MCP19035
ADM00435	MCP1643 Synchronous Boost LED Constant Current Regulator Evaluation Board	MCP1643
ADM00458	MCP16251 and MCP1640B Synchronous Boost Converters Evaluation Board	MCP16251, MCP1640B
ADM00468	MCP1710 Demonstration Board	MCP1710
ADM00578	MCP19114 Flyback Standalone Evaluation Board	MCP19114
ADM00530	MCP1632 300 kHz Boost Converter Demonstration Board	MCP1632
ARD00386	MCP1640 12V/50 mA Two Cell Input Boost Converter Reference Design	MCP1640
ARD00410	MCP16301 High-Voltage Single-Inductor Ćuk LED Driver Demonstration Board	MCP16301
ARD00458	MCP16251 and MCP1640B Synchronous Boost Converts Evaluation Board	MCP16251, MCP1640B
MCP1252DM-BKLT	MCP1252 Charge Pump Backlight Demonstration Board	MCP1252
MCP1256/7/8/9EV	MCP1256/7/8/9 Charge Pump Evaluation Board	MCP1256, MCP1257, MCP1258, MCP1259
MCP1601EV	MCP1601 Buck Regulator Evaluation Board	MCP1601
MCP1602EV	MCP1602 Evaluation Board	MCP1602
MCP1603EV	MCP1603 Buck Converter Evaluation Board	MCP1603
MCP1603RD-TNY	MCP1603 Tiny Reference Design	MCP1603
MCP1612EV	MCP1612 Synchronous Buck Regulator Evaluation Board	MCP1612
MCP1630RD-DDBK1	MCP1630 +12V in Dual Output Buck Converter Reference Design	MCP1630
MCP1630RD-DDBK3	MCP1630 Bidirectional 4-Cell Li-Ion Charger Reference Design	MCP1630V, PIC16F88, MCP6022
MCP1630RD-NMC1	MCP1630 Low-Cost NiMH Battery Charger Reference Design	MCP1630, PIC12F683, MCP6292, MCP1702
MCP1630DM-DDBK1	MCP1630 1A Bias Supply Demonstration Board	MCP1630
MCP1630DM-DDBS1	MCP1630 Automotive Input Boost Converter Demonstration Board	MCP1630, PIC12F683
MCP1630DM-LED2	MCP1630 Boost Mode LED Driver Demonstration Board	MCP1630V, PIC12F683, MCP1702
MCP1630RD-LIC1	MCP1630 Li-Ion Multi Bay Battery Charger Reference Design	MCP1630
MCP1630RD-LIC2	MCP1630 Low Cost Li-Ion Battery Charger Reference Design	MCP1630
MCP1630RD-SALED	MCP1630 SEPIC Automotive LED Driver Reference Board	MCP16301
MCP1630DM-NMC1	MCP1630 NiMH Battery Charger Demonstration Board	MCP1630
MCP1630DM-DDBS2	MCP1630 Coupled Inductor Boost Demonstration Board	MCP1630, PIC12F683
MCP1630DM-DDBK4	MCP1630 Automotive Input, Triple Output Converter Demonstration Board	MCP1630, PIC12F683
MCP1631RD-DCPC1	MCP1631HV Digitally Controlled Programmable Current Source Reference Design	MCP1631HV, PIC16F616
MCP1631RD-MCC1	MCP1631HV Multi-Chemistry Battery Charger Reference Design	MCP1631HV, PIC16F883
MCP1631RD-MCC2	MCP1631HV Multi-Chemistry Battery Charger Reference Design	MCP1631HV, PIC16F883
MCP1640EV-SBC	MCP1640 Sync Boost Converter Evaluation Board	MCP1640
MCP1640RD-4ABC	MCP1640 Single Quad-A Battery Boost Converter Reference Design	MCP1640, PIC12F617
MCP1650DM-LED1	MCP1650 3W White LED Demonstration Board	MCP1650

Analog Design Development Tools

Evaluation, Demonstration and Development Kits		
Order #	**Description**	**Devices Supported**
Power Management Demonstration and Evaluation Tools (Continued)		
MCP1650DM-LED2	MCP1650 Multiple White LED Demonstration Board	MCP1650
MCP1650EV	MCP1650 Boost Controller Evaluation Board	MCP1650
MCP1650DM-DDSC1	MCP1650 SEPIC Power Supply Demonstration Board	MCP1650
MCP1726EV	MCP1726 1A LDO Evaluation Board	MCP1726
MCP73113EV-1SOVP	MCP73113 OVP Single Cell Li-Ion Battery Charger Evaluation Board	MCP73113, MCP73114
MCP73213EV-2SOVP	MCP73213 OVP Dual Cell Li-Ion Battery Charger Evaluation Board	MCP73213
MCP73X23EV-LFP	MCP73X23 OVP Lithium Iron Phosphate Battery Charger Evaluation Board	MCP73123, MCP73223
MCP73871DM-VPCC	MCP73871 Demonstration Board with Voltage Proportional Current Control	MCP73871
MCP7381XEV	MCP7381X Low-Cost Li-Ion Battery Charger Evaluation Board	MCP73811, MCP73812
MCP7382XEV	MCP7382X Li-Ion Battery Charger Evaluation Board	MCP7382X
MCP73831EV	MCP73831 Evaluation Kit	MCP73831
MCP73833EV	MCP73833 Li-Ion Battery Charger Evaluation Board	MCP73833, MCP73834
MCP7383XEV-DIBC	MCP73837/8 AC/USB Dual Input Battery Charger Evaluation Board	MCP73837, MCP73838
MCP7383XRD-PPM	MCP7383X Li-Ion System Power Path Management Reference Design	MCP73831, MCP73832, MCP73833, MCP73834
MCP73855EV	MCP73855 Li-Ion Battery Charger Evaluation Board	MCP73855
MCP73871EV	MCP73871 Evaluation Board	MCP73871
SOT23-3EV-VREG	SOT23-3 Voltage Regulator Evaluation Board	MCP1701A, MCP1702, MCP1703
SOT223-3EV-VREG	SOT223-3 Voltage Regulator Evaluation Board	MCP1791, MCP1824, MCP1825, MCP1826
SOT89-3EV-VREG	SOT89-3 Voltage Regulator Evaluation Board	MCP1700, MCP1701A, MCP1702, MCP1703
SOT23-5EV-VREG	SOT23-5 Voltage Regulator Evaluation Board	MCP1801, MCP1802, TC1014/1015/1185, and other SOT23-5 LDOs
SOT223-5EV-VREG	SOT223-5 Voltage Regulator Evaluation Board	MCP1790, MCP1824, MCP1825, MCP1826
TO263-3EV-VREG	TO220-3/TO263-3 Voltage Regulator Evaluation Board	MCP1790, MCP1825S, MCP1826S, MCP1827S
TO263-5EV-VREG	TO220-5/TO263-5 Voltage Regulator Evaluation Board	MCP1790, MCP1791, MCP1825, MCP1826, MCP1827
TC110DM	TC110 Boost Converter Demonstration Board	TC110, MCP73832
TC115EV	TC115 PFM/PWM Boost Converter Evaluation Board	TC115
TC1016/17EV	TC1016/17 LDO Linear Regulator Evaluation Board	TC1016/17
TC1303BDM-DDBK1	TC1303B Demonstration Board	TC1303B
TC1303DM-DDBK2	TC1303 DFN Adjustable Output Demonstration Board	TC1303C
EVB-UCS1001	UCS1001 Evaluation Board	UCS1001-1, UCS1001-2
EVB-UCS1002	UCS1002 Evaluation Board	UCS1002

Analog Design Development Tools

Evaluation, Demonstration and Development Kits		
Order #	**Description**	**Devices Supported**
Interface Products Demonstration and Evaluation Tools		
ADM00419	MCP2210 Breakout Module	MCP2210
ADM00421	MCP2210 Evaluation Kit	MCP2210
DV251001	MCP2510/2515 CAN Developer's Kit	MCP2515, MCP2510
DV250501	MCP250XX CAN I/O Expanders Developer's Kit	MCP25020, MCP25025, MCP25050, MCP25055
EVB8710	LAN8710A High-Speed 10/100 Ethernet Transceiver Customer Evaluation Board	LAN8710A
EVB8720	LAN8720A High-Speed 10/100 Ethernet Transceiver Customer Evaluation Board	LAN8720A
EVB8740	LAN8740/LAN8741 High-Speed 10/100 EEE enabled Ethernet Transceiver Customer Evaluation Board	LAN8740A, LAN8741A
EVB8742	LAN8742 High-Speed 10/100 Ethernet Transceiver Customer Evaluation Board with Wake-on-LAN	LAN8742A
EVB88730	LAN88730 Automotive Grade High-Speed MII/RMII 10/100 Ethernet Transceiver Customer Evaluation Board	LAN88730
EVB89218-MINI	LAN89218 Automotive Grade High-Performance 10/100 Ethernet Controller Customer Evaluation Board	LAN89218
EVB9303	LAN9303 Small Form-Factor 3 Port Managed 10/100 Ethernet Switch Customer Evaluation Board	LAN9303
EVB9303M	LAN9303M Small Form-Factor 3 Port Managed 10/100 Ethernet Switch with Dual MII Customer Evaluation Board	LAN9303M
EVB9512	LAN9512 High-Speed USB 2.0 to 10/100 Ethernet with 2-Port Hub Customer Evaluation Board	LAN9512
EVB9514	LAN9513/LAN9514 High-Speed USB 2.0 to 10/100 Ethernet with 2/3-Port Hub Customer Evaluation Board	LAN9513, LAN9514
EVB-LAN7500	LAN7500 High-Speed USB 2.0 to 10/100/1000 Ethernet Customer Evaluation Board	LAN7500
EVB-LAN7500-LC	LAN7500 High-Speed USB 2.0 to 10/100/1000 Ethernet Dongle	LAN7500
EVB-LAN89303	LAN89303 Automotive Grade 3-Port Managed 10/100 Ethernet Switch Customer Evaluation Board	LAN89303
EVB-LAN89530-MII	LAN89530 Automotive Grade High-Speed USB 2.0 to 10/100 Ethernet Customer Evaluation Board: MII Interface	LAN89530
EVB-LAN89730-MII	LAN89730 Automotive Grade High-Speed USB 2.0 HSIC to 10/100 Ethernet Customer Evaluation Board	LAN89730
EVB-LAN9220-MINI	LAN9220 High-Performance 16-bit Small Formfactor 10/100 Ethernet Controller Customer Evaluation Board	LAN9220
EVB-LAN9221-MINI	LAN9221 High-Performance 16-bit 10/100 Ethernet Controller Customer Evaluation Board	LAN9221
EVB-LAN9313M	LAN9313 3-Port 10/100 Ethernet Switch Customer Evaluation board with MII MAC Interface	LAN931X
EVB-LAN9313P	LAN9313 3-Port 10/100 Ethernet Switch Customer Evaluation board with MII PHY Interface	LAN931X
EVB-LAN9500A-LC	LAN9500A High-Speed USB 2.0 to 10/100 Ethernet Dongle	LAN9500A
EVB-LAN9500A-MII	LAN9500A High-Speed USB 2.0 to 10/100 Ethernet with MII Customer Evaluation Board	LAN9500A
EVB-LAN9730-MII	LAN9730 High-Speed USB 2.0 HSIC to 10/100 Ethernet Customer Evaluation Board	LAN9730
EVB-SEC1110	SEC1110 Smart Card Bridge to USB Customer Evaluation Board	SEC1110
EVB-SEC1210	SEC1210 Smart Card Bridge to USB, PCI and SPI Customer Evaluation Board	SEC1210
EVB-SEC1212-DEV	SEC1212 Smart Card Bridge to USB, PCI and SPI Customer Evaluation Board: 48-pin QFN	SEC1212
EVB-SEC2410-SSD	Hi-Speed USB 2.0 Flash Media Controller with AES Encryption and Integrated Smart Card Reader Evaluation Board	SEC2410
EVB-USB2240-IND	USB2240 Ultra Fast High-Speed USB 2.0 Multi-Slot Flash Media Controller Customer Evaluation Board	USB224X
EVB-USB2250	USB2250 Ultra Fast High-Speed USB 2.0 Multi-Slot Flash Media Controller Customer Evaluation Board	USB225X
EVB-USB2412	USB2412 High-Speed USB 2.0 Single TT 2 Port Hub in a Tiny QFN Package Customer Evaluation Board	USB2412
EVB-USB2422	USB2422 High-Speed USB 2.0 Single TT 2 Port Hub with Battery Charging Support Evaluation Board	USB2422
EVB-USB2512BC	USB2512B High-Speed USB 2.0 Multi TT 2 Port Hub with Battery Charging Support Customer Evaluation Board	USB2512B
EVB-USB2513BC	USB2513B High-Speed USB 2.0 Multi TT 3 Port Hub with Battery Charging Support Customer Evaluation Board	USB2513B

Analog Design Development Tools

Evaluation, Demonstration and Development Kits		
Order #	Description	Devices Supported
Interface Products Demonstration and Evaluation Tools (Continued)		
EVB-USB2514BC	USB2514B High-Speed USB 2.0 Multi TT 4 Port Hub with Battery Charging Support Customer Evaluation Board	USB2514B
EVB-USB2514B-FS	USB2514 Full-Speed USB 2.0 4 Port Hub Customer Evaluation Board	USB2514B
EVB-USB2514QFN48	USB2514 High-Speed USB 2.0 Multi TT 2 Port Hub in a Tiny QFN Package Customer Evaluation Board	USB2514B
EVB-USB2517	USB2517 High-Speed USB 2.0 Multi TT 7 Port Hub Customer Evaluation Board	USB2517
EVB-USB2534BC	USB2534 4-Port USB 2.0 Hub with Battery Charging Evaluation Board	USB2534
EVB-USB2640	USB2640 USB 2.0 2-Port Hub, with Ultra-Fast Flash Media Controller Customer Evaluation Board	USB2640
EVB-USB2642	USB2642 USB 2.0 2-Port Hub with UCS81001 Port Power Controller and Ultra Fast Flash Media Controller (MMC 4 and 8 bit, SD)	USB2642
EVB-USB2660	USB2660 USB 2.0 2-Port Hub, with Two Ultra Fast Flash Media Controller Customer Evaluation Board	USB2660
EVB-USB3320	USB3320 USB 2.0 Transceiver with ULPI Interface Evaluation Board	USB332X
EVB-USB3330	USB3330 USB 2.0 Transceiver with ULPI Interface, Rapid Charge and Multi-Frequency Reference Clock Evaluation Board	USB333X
EVB-USB3340	USB3340 USB 2.0 Transceiver with ULPI Interface, Rapid Charge and Multi-Frequency Reference Clock Evaluation Board	USB334X
EVB-USB3343	USB3343 USB 2.0 Transceiver with ULPI Interface, Rapid Charge and 26 MHz Frequency Reference Clock Evaluation Board	USB334X
EVB-USB3503	USB3503 HSIC to USB 2.0 Mobile Hub Evaluation Board	USB3503
EVB-USB3613	USB3613 3-Port HSIC Up/Down USB 2.0 Hub Evaluation Board	USB3613
EVB-USB3740	USB3740 High-Speed Switch Evaluation Board	USB3740
EVB-USB3750	USB 2.0 Port Protection with Integrated Switch and Charger Detection Evalustation Board	USB375X
EVB-USB3803	USB3803 USB 2.0 Mobile Hub Evaluation Board	USB3803
EVB-USB3813	USB3813 3-Port HSIC Down USB 2.0 Hub Evaluation Board	USB3813
EVB-USB4604BCH	USB4604 4-Port HSIC Up USB 2.0 Hub with UCS1002 Battery Charging Evaluation Board	USB4604
EVB-USB4604BCU	USB4604 4-Port USB 2.0 Hub with UCS1002 Battery Charging Evaluation Board	USB4604
EVB-USB4624BCUH	USB4624 4-Port Switchable USB 2.0 and HSIC Hub Evaluation Board	USB4624
EVB-USB4640	USB4640 HSIC to USB 2.0 2 Port Hub with Ultra Fast Flash Media Controller Customer Evaluation Board	USB4640
EVB-USB5534	USB5534B High Speed USB 3.0 4 Port Hub Evaluation Board	USB553xB
EVB-USB5534BC	USB5534B High Speed USB 3.0 4 Port Hub with UCS1002 Battery Charging Evaluation Board	USB553xB
EVB-USB5537	USB5537B High Speed USB 3.0 7 Port Hub Evaluation Board	USB5537B
EVB-USB82514	USB82514 Auto-Grade USB 2.0 High-Speed 4-Port Hub Evaluattion Board	USB82514
EVB-USB82642	USB82642 Auto-Grade USB 2.0 Hub with UCS81001 Battery Charging and Flash Media Controller Evaluation Board	USB82642
EVB-USB83340	USB83340 Automotive-Grade High-Speed USB 2.0 Transceiver	USB83340
GPIODM-KPLCD	GPIO Expander Keypad and LCD Demonstration Board	MCP23008, MCP23S08, MCP23017, MCP23S17, PIC18F4550, MCP1702
MCP212XDM	MCP2120/22 Developer's Board	MCP2120, MCP2122
MCP212XEV-DB	MCP212X Developer's Daughter Board	MCP212X
MCP2140DM-TMPSNS	MCP2140 IrDA® Wireless Temp Demonstration Board	MCP2140
MCP215X/40EV-DB	MCP215X/40 Developer's Daughter Board	MCP2140, MCP2150/55
MCP215XDM	MCP215X Data Logger Demonstration Board	MCP2150/55
MCP2150DM	MCP2150 Developer's Board	MCP2150, MCP2155
MCP2200EV-VCP	MCP2200 USB to RS232 Demonstration Board	MCP2200

Analog Design Development Tools

Evaluation, Demonstration and Development Kits		
Order #	Description	Devices Supported
Interface Products Demonstration and Evaluation Tools (Continued)		
MCP23X08EV	MCP23X08 8-bit GPIO Expander Evaluation Board	MCP23008, MCP23S08
MCP23X17EV	MCP23X17 16-bit GPIO Expander Evaluation Board	MCP23017, MCP23S17
MCP2515DM-BM	MCP2515 CAN Bus Monitor Demonstration Board	MCP2515, MCP2551
MCP2515DM-PCTL	MCP2515 CAN Controller PICtail Demonstration Board	MCP2515
MCP2515DM-PTPLS	MCP2515 PICtail Plus Daughter Board	MCP2515, MCP2551
PKSERIAL-I2C1	PICkit™ Serial I²C Demonstration Board	24LC02B, MCP9801, MCP3221, TC1321, MCP23008
PKSERIAL-SPI1	PICkit Serial SPI Demonstration Board	25LC020A, TC77, MCP3201, MCP4822, MCP41010, MCP6S92, MCP23S08
Linear Demonstration and Evaluation Tools		
ADM00375	MCP6H04 Evaluation Board	MCP6H04
ADM00443	MCP6421 EMIRR Evaluation Board	MCP6421
ARD00354	MCP6N11 and MCP6V2X Wheatstone Bridge Reference Design	MCP6N11, MCP6001, MCP6V26, MCP6V27, PIC18F2553
MCP6031DM-PTPLS	MCP6031 Photodiode PICtail Plus Demonstration Board	MCP6031
MCP651EV-VOS	MCP651 Input Offset Evaluation Board	MCP651
MCP661DM-LD	MCP661 Line Driver Demonstration Board	MCP661, MCP662, MCP665
MCP6S22DM-PICTL	MCP6S22 PGA PICtail Demonstration Board	MCP6S22
MCP6S2XEV	MCP6S2X PGA Evaluation Board	MCP6S2X
MCP6SX2DM-PCTLPD	MCP6SX2 PGA Photodiode PICtail Demonstration Board	MCP6S22/92
MCP6SX2DM-PCTLTH	MCP6SX2 PGA Thermistor PICtail Demonstration Board	MCP6S22/92
MCP6V01DM-VOS	MCP6V01 Input Offset Demonstration Board	MCP6V01, MCP6V03, MCP6V06, MCP6V08
MCP6V01RD-TCPL	MCP6V01 Thermocouple Auto-Zeroed Reference Design	MCP6V01
MCP6XXXEV-AMP1	MCP6XXX Amplifier Evaluation Board 1	MCP6021
MCP6XXXEV-AMP2	MCP6XXX Amplifier Evaluation Board 2	MCP6021
MCP6XXXEV-AMP3	MCP6XXX Amplifier Evaluation Board 3	MCP6021
MCP6XXXEV-AMP4	MCP6XXX Amplifier Evaluation Board 4	MCP6021
MCP6XXXDM-FLTR	Active Filter Demonstration Board Kit	MCP6271
PIC16F690DM-PCTLHS	Humidity Sensor PICtail Demonstration Board	MCP6291, PIC16F690
Analog Blank Evaluation Boards		
SC70EV	SC70-6 and SOT-23-6/8 to DIP-8 Evaluation Board	SC70-6/5/3, SOT-23-8/6/5/3, and DIP-8 Devices
SOIC8EV	SOIC/MSOP/TSSOP/DIP 8-pin Evaluation Board	8-pin SOIC, MSOP, TSSOP, DIP Devices
SOIC14EV	SOIC/TSSOP/DIP 14-pin Evaluation Board	14-pin SOIC, TSSOP, DIP Devices
TSSOP20EV	20-pin TSSOP and SSOP Evaluation Board	TSSOP-20/16/14/8 and SSOP-20
VSUPEV	SOT-23-3 Voltage Supervisor Evaluation Board	SOT-23-3 Devices
VSUPEV2	SOT-23-5/6 Voltage Supervisor Evaluation Board	SOT-23-5, SOT-23-6 Devices
Miscellaneous Analog Demonstration and Evaluation Tools		
ADM00308	MTS2916A Dual Full-Bridge Stepper Motor Driver Evaluation Board	MTS2916A
ADM00344	RE46C190 Demonstration Board	RE46C190
EFIELDEV	Electrical Field Evaluation Board	N/A
HFIELDEV	Magnetic Field Evaluation Board	N/A
INTRFCEV	PSRR and Digital Noise Evaluation Board	N/A

Featured Analog Development Tools

Thermal Management Products

MCP9700 Thermistor Demo Board (MCP9700DM-TH1)

The MCP9700 Thermistor Demo Board contains analog circuitry to measure temperature. The board uses BC Components' 232264055103 NTC thermistor to convert temperature to resistance. The thermistor is placed in a voltage divider which converts resistance to voltage. This voltage is filtered and placed at the MCP6S22 Programmable Gain Amplifier's (PGA) CH0 input. The PGA gains and buffers the thermistor.

MCP9800 Temperature Data Logger Demo Board (MCP9800DM-DL)

This board allows you to store up to 128,000 temperature readings from the MCP9800 sensor to the 24LC1025, Microchip's 1024 Kbit EEPROM. A PIC16F684 MCU communicates with the sensor and EEPROM. In addition, the PIC MCU interfaces to a PC using the PICkit 1 Flash Starter Kit and transfers the temperature readings from the EEPROM to the PC. Microsoft® Excel can be used to view the data.

Mixed Signal Products

MCP39F501 Energy Metering and Power Monitoring Demonstration Board (ARD00455)

The MCP39F501 Power Monitor Demonstration Board is a fully functional single-phase power monitor. This low-cost design does not use any transformers and requires few external components. The device calculates active power, reactive power, RMS current, RMS voltage, power factor, line frequency and other typical power quantities as defined in the MCP39F501 data sheet. The MCP39F501 Power Monitor Utility software is used to calibrate and monitor the system and can be used to create custom calibration setups. For some accuracy requirements, only a single point calibration may be needed.

MCP3421 Battery Fuel Gauge Demonstration Board (MCP3421DM-BFG)
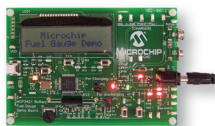
This board is used to demonstrate the MCP3421 18-bit delta-sigma ADC for battery fuel gauging applications. It includes two MCP3421 devices, MCP73831 (single cell Li-Ion/Li-Polymer Charger) and PIC18F4550 MCU. The board measures the battery voltage and the current coming out from the battery in the discharging mode. If charging mode is enabled (optional), it also measures the current coming into the battery in the charging mode using the ADC device. It calculates the total fuel used and also the amount of fuel remaining.

MCP42XX PICtail Plus Daughter Board (MCP42XXDM-PTPLS)
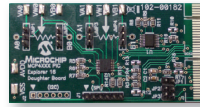
The MCP42XX PICtail Plus Daughter Board is used to demonstrate the operation of the MCP42XX Digital Potentiometers. The operation of the MCP41XX devices is similar to that of the MCP42XX devices. Therefore, this demo board can be used as a development platform for either device family. This board is designed to be used in conjunction with either the PIC24 Explorer 16 Demo Board or the PICkit Serial Analyzer.

Power Management Products

MCP1631HV Multi-Chemistry Battery Charger Reference Design (MCP1631RD-MCC1)

This reference design is a complete stand-alone constant current battery charger for NiMH, NiCd or constant current/constant voltage for Li-Ion battery packs. When charging NiMH or NiCd batteries, the reference design is capable of charging one, two, three or four batteries connected in series and one or two series batteries for Li-Ion. This board utilizes the MCP1631HV (high-speed PIC MCU PWM TSSOP-20) and PIC16F883 (28-pin SSOP).

MCP73X23 OVP Lithium Iron Phosphate Battery Charger Evaluation Board (MCP73X23EV-LFP)

The MCP73X23 Lithium Iron Phosphate Battery Charger Evaluation board demonstrates the features of Microchip's MCP73123 and MCP73223 Lithium Iron Phosphate (LiFePO4) Battery Charge Management Controller with Input Overvoltage Protection.

MCP1640 Sync Boost Converter Evaluation Board (MCP1640EV-SBC)

Developed to help engineers reduce their product design cycle time, the MCP1640 Synchronous Boost Converter Evaluation board demonstrates the MCP1640 in two boost-converter applications with multiple output voltages. It can be used to evaluate both package options (6-pin SOT-23 and 2 × 3 8-pin DFN)

Interface Products

USB253X Hi-Speed USB 2.0 Programmable Hub Controller with Battery Charging Support and FlexConnect Feature (EVB-USB2534)
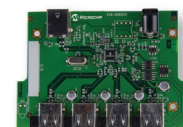
The USB2534 is a 4-port USB 2.0 hub controller that is fully programmable to customize configuration. It features FlexConnect to role swap host and device ports and LPM for lower power capability. Each downstream port has battery charging capability and can detect all of the major USB charger profiles.

Featured Analog Development Tools

LAN874X 10/100 Ethernet Transceiver with EEE and Wake-On-LAN (EVB8740)

The EVB8740 is a PHY evaluation board for our LAN874X family, which integrates Energy Efficient Ethernet and Wake-on-LAN features. It interfaces to a MAC controller via a standard MII or RMII interface.

LAN7500 Hi-Speed USB 2.0 to Gigabit Ethernet Bridge Controller (EVB-LAN7500)

The EVB-LAN7500 is used to evaluate our LAN7500 Hi-Speed USB 2.0 to Gigabit Ethernet Bridge Controller solution. System architectures requiring Ethernet connectivity can utilize an existing USB port with our LAN7500 to achieve this requirement. A USB dongle version is also available (EVB-LAN7500-LC).

LAN9500A Hi-Speed USB 2.0 to 10/100 Ethernet Bridge Controller (EVB-LAN9500A-MII/ EVB-LAN9500A-LC)
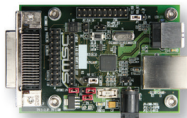
The EVB-LAN9500A-MII is used to evaluate our LAN9500A Hi-Speed USB 2.0 to Fast Ethernet Bridge Controller solution. Using an existing USB port with our LAN9500A allows you to add Ethernet connectivity to your system architecture.

USB3340 Hi-Speed USB 2.0 Transceiver with ULPI Interface (EVB-USB3340)

The EVB-USB3340 is used to evaluate our USB334X family of highly integrated USB 2.0 transceivers with ULPI interface. The features and functions are identical to those of the USB333X family except the USB334X comes in a convenient, widely-used 32-pin QFN package.

USB3740 Hi-Speed USB 2.0 2-Port Switch (EVB-USB3740)
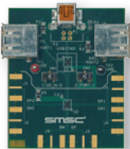
The EVB-USB3740 is used to evaluate our USB3740 USB 2.0 compliant 2-port switch. Some applications require a single USB port to be shared with other functions. The USB3740 is a small and simple 2-port switch providing system design flexibility.

USB2640 USB 2.0 Port Hub with Ultra Fast Flash Media Controller Evaluation Board (EVB-USB2640)

The USB2640 is an Ultra Fast USB 2.0 Hub, Flash media controller, and protocol bridge combo. The EVB-USB2640 Evaluation Board demonstrates a stand-alone application for developers of applications such as Flash media card reader/writer, printers, desktop and mobile PCs, consumer A/V and flat panel displays.

MCP2515 CAN Bus Monitor Demo Board (MCP2515DM-BM)
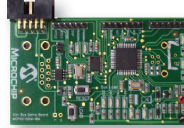
The MCP2515 CAN Bus Monitor Demo board kit contains two identical boards which can be connected together to create a simple two-node Controller Area Network (CAN) bus, which can be controlled and/or monitored via the included PC interface. The board(s) can also be connected to an existing CAN bus.

USB to UART Converter Evaluation Board (MCP2200EV-VCP)

The MCP2200EV-VCP is a USB-to-RS232 development and evaluation board for the MCP2200 USB-to-UART device. The board allows for easy demonstration and evaluation of the MCP2200. The accompanying software allows the special device features to be configured and controlled. The board is powered from USB and has a test point associated with each GPIO pin. In addition, two of these pins are connected to LEDs which can be used to indicate USB-to-UART traffic when the associated pins are configured as TxLED and RxLED pins respectively.

Linear Products

### MCP6V01 Thermocouple Auto-Zeroed Ref Design Board (MCP6V01RD-TCPL)

The MCP6V01 design board demonstrates how to use a difference amplifier system to measure Electromotive Force (EMF) voltage at the cold junction of thermocouple in order to accurately measure temperature of the thermocouple bead. This can be done by using the MCP6V01 auto-zeroed op amp because of its ultra low offset Voltage (VOS) and high Common Mode Rejection Ratio (CMRR).

MCP6N11 and MCP6V2X Wheatstone Bridge Reference Design (ARD00354)
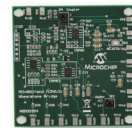
This board demonstrates the performance of Microchip's MCP6N11 instrumentation amplifier (INA) and a traditional three op amp INA using Microchip's MCP6V26 and MCP6V27 auto-zeroed op amps. The input signal comes from an RTD temperature sensor in a Wheatstone bridge. Real world interference is added to the bridge's output to provide realistic performance comparisons. Data is gathered and displayed on a PC for ease of use.

MCP6H04 Evaluation Board (ADM00375)
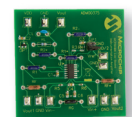
The MCP6H04 Evaluation Board is intended to support an instrumentation amplifier and show the capability of the MCP6H04 operational amplifier. It uses a quad op amp in a difference amplifier configuration with input buffers and voltage reference. The test points for the power supply, ground, input signals, output signals, and voltage reference allow lab equipment to be connected to the board.

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