Op Amp Dual Low Power Amplifier R-R I/O 6V Automotive 8-Pin PDIP Tube

Manufacturer:	Microchip Technology, Inc
Package/Case:	DIP8
Product Type:	Amplifier ICs
RoHS:	RoHS Compliant/Lead free RoHS
Lifecycle:	Active

Images are for reference only

Inquiry

General Description

The MCP6002 is a dual general purpose op amp offering rail-to-rail input and output over the 1.8 to 6V operating range. This amplifier has a typical GBWP of 1 MHz with typical quiescent current of 100 microamperes. The MCP6002 is available in 8-lead PDIP, SOIC and MSOP packages.
M Features
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• Available in SC-70-5 and SOT-23-5 packages 1 MHz Gain Bandwidth Product (typ.) Rail-to-Rail Input/Output Supply Voltage: 1.8V to 5.5V Supply Current: IQ = 100 µA (typ.) 90° Phase Margin (typ.) Temperature Range: – Industrial: -40°C to +85°C – Extended: -40°C to +125°C
• Available in Single, Dual and Quad Packages MCP6001/2/4 Description The Microchip Technology Inc. MCP6001/2/4 family of operational amplifiers (op amps) is specifically designed for general-purpose applications. This family has a 1 MHz gain bandwidth product and 90° phase margin (typ.). It also maintains 45° phase margin (typ.) with 500 pF capacitive load. This family operates from a single supply voltage as low as 1.8V, while drawing 100 µA (typ.) quiescent current. Additionally, the MCP6001/2/4 supports rail-to-rail input and output swing, with a common mode input voltage range of VDD + 300 mV to V SS – 300 mV. This family of operational amplifiers is designed with Microchip's advanced CMOS process. The MCP6001/2/4 family is available in the industrial and extended temperature ranges. It also has a power supply range of 1.8V to 5.5V. Applications
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• Automotive Portable Equipment Photodiode Pre-amps Analog Filters Notebooks and PDAs Battery-Powered Systems Package Types MCP6001 SC-70-5, SOT-23-5 VOUT 1 VSS 2 VIN+ 3 + MCP6002 PDIP, SOIC, MSOP VOUTA 1 VINA– 2 4 VIN– VINA+ 3 VSS 4 A – + B + 8 VDD 7 VOUTB 6 VINB– 5 VINB+ 5 VDD Available Tools Spice Macro Models (at www.microchip.com) FilterLab® Software (at www.microchip.com) Typical Application VDD VIN + MCP6001 VSS R1 R1 Gain = 1 + —-R2 VOUT MCP6001R SOT-23-5 VOUT 1 VDD 2 VIN+ 3 + + – 5 VSS MCP6004 PDIP, SOIC, TSSOP VOUTA 1 VINA– 2 14 VOUTD A D + – + – 13 VIND– 12 VIND+ 11 VSS 10 VINC+ – + + B C 9 VINC– 8 VOUTC 4 VIN– MCP6001U SOT-23-5 VIN+ 1 VSS 2 VIN– 3 5 VDD VINA+ 3 VDD 4 VINB+ 5 VINB– 6 R2 VREF 4 VOUT VOUTB 7 Non-Inverting Amplifier □ 2003 Microchip Technology Inc. DS21733D-page 1 MCP6001/2/4 1.0 ELECTRICAL CHARACTERISTICS PIN FUNCTION TABLE Name Function Absolute Maximum Ratings † VDD – VSS .7.0V All Inputs and Outputs VSS -0.3V to V DD +0.3V Difference Input Voltage . |VDD – VSS| Output Short Circuit Current continuous Current at Input Pins ±2 mA Current at Output and Supply Pins ±30 mA Storage Temperature -65°C to +150°C Maximum Junction Temperature (TJ) +150°C ESD Protection On All Pins (HBM;MM) . ≥ 4 kV; 200V † Notice: Stresses above those listed under "Maximum Ratings" may cause permanent damage to the device. This is a stress rating only and [.]

Key Features

Rail-to-rail input and output

Extended temperature range

Application

Automotive, Portable Devices, Industrial, Signal Processing, Consumer Electronics

Recommended For You

MCP609-I/SL

Microchip Technology, Inc

SOP14

MCP602-I/P

Microchip Technology, Inc

DIP

MCP6402T-E/MNY

Microchip Technology, Inc

QFN

MCP607-I/P

Microchip Technology, Inc

DIP8

MCP6442-E/SN

Microchip Technology, Inc

SOP8

MCP6022-I/P

Microchip Technology, Inc

DIP8

MCP6292-E/SN

Microchip Technology, Inc

SOP8

MCP6H02-E/SN

Microchip Technology, Inc

SOP8

MCP6542-E/SN

Microchip Technology, Inc

SOP-8

MCP6044-I/SL

Microchip Technology, Inc

SOP14

MCP6S26-I/ST

Microchip Technology, Inc

TSSOP14

MCP6041-I/SN

Microchip Technology, Inc

SOP8

MCP6562-E/MS

Microchip Technology, Inc

MSOP8

MCP6N16-100E/MS

Microchip Technology, Inc

MSOP8

MCP6561RT-E/OT

Microchip Technology, Inc

SOT23-5