

TL082 (ACTIVE)

JFET-Input Operational Amplifier

 [TL08xx JFET-Input Operational Amplifiers \(Rev. I\)](#)

Recommended alternative parts

- [TL072](#) - The TL07x series are the low-noise versions of the TL08x series amplifiers

Description

The TL08xx JFET-input operational amplifier family is designed to offer a wider selection than any previously developed operational amplifier family. Each of these JFET-input operational amplifiers incorporates well-matched, high-voltage JFET and bipolar transistors

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Features

- Low Power Consumption: 1.4 mA/ch Typical
- Wide Common-Mode and Differential Voltage Ranges
- Low Input Bias Current: 30 pA

Parametrics

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	TL082
Number of Channels (#)	2
Total Supply Voltage (Min) (+5V=5, +/-5V=10)	7
Total Supply Voltage (Max) (+5V=5, +/-5V=10)	36
GBW (Typ) (MHz)	3
Slew Rate (Typ) (V/us)	13
Rail-to-Rail	In to V+
Vos (Offset Voltage @ 25C) (Max) (mV)	6
Iq per channel (Typ) (mA)	1.4
Vn at 1kHz (Typ) (nV/rtHz)	18
Rating	Catalog
Operating Temperature Range (C)	-40 to 85 0 to 70
Package Group	PDIP SO SOIC TSSOP
Package Size: mm2:W x L (PKG)	See datasheet (PDIP),See datasheet (C
Offset Drift (Typ) (uV/C)	18
Additional Features	N/A
Input Bias Current (Max) (pA)	200

Featured reference designs for you

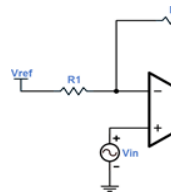
- [24-V AC Power Stage With Wide Vin Converter and Battery Backup Reference Design for Smart Thermostat](#)
- [USB Type-C™ and Power Delivery Minidock With Video and Charging Support Reference Design](#)
- [Solar MPPT Charge Controller](#)
- [Reference Design for Reinforced Isolation 3-Phase Inverter with Current, Voltage and Temp Protection](#)
- [Wireless IoT, Bluetooth® Low Energy, 4½ Digit, 100kHz True RMS Digital Multimeter Reference Design](#)

WEBENCH® Designer TL082

Amplifier Topology

☒ Non-inverting

☐ Inverting



Desired Power Supply Voltage

Positive Supply (Vcc):

Negative Supply (Vee):

Allowed Power Supply(Vcc-Vee) =

Desired Input and Output Requirements

Min

Max

CMRR (Typ) (dB)	86
Output Current (Typ) (mA)	10
Architecture	FET
	Order Now

Vin V

Vout V

Minimum Temperature = 0.0 °C


Maximum Temperature = 70.0 °C

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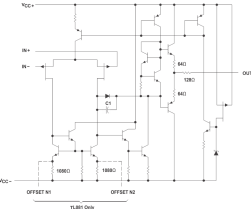
Other qualified versions of TL082

Version	Part Number	Definition
Military	TL082M	QML certified for Military and Defense Applications
Automotive	TL082-Q1	Q100 devices qualified for high-reliability automotive applications targeting zero defects

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Diagrams (1)

Functional Diagram



Companion products

Part number	Name	Datasheet	Additional information	Why are these companion products?
SN74HC165	8-Bit Parallel-Load Shift Registers	Online Download (1233KB)	Technical Documents	Customers who designed with TL082 also designed with SN74HC165
ISO5500	4.243 kVrms 2.5 A Isolated IGBT Gate Driver	Online Download (1602KB)	Technical Documents Tools & Software	Customers who designed with TL082 also designed with ISO5500
TMS320F28034	Piccolo Microcontroller	Online Download (1594KB)	Technical Documents Tools & Software	Customers who designed with TL082 also designed with TMS320F28034
SN74HC595	8-Bit Shift Registers With 3-State Output Registers	Online Download (1364KB)	Technical Documents Tools & Software	Customers who designed with TL082 also designed with SN74HC595
ISO1050	Isolated 5 V CAN Transceiver	Online Download (1479KB)	Technical Documents Tools & Software	Customers who designed with TL082 also designed with ISO1050