

FEATURES

Current feedback

Wide output swing

18.8 V p-p differential, (50 Ω R_{LOAD}) from 12 V supply

20.0 V p-p differential, (100 Ω R_{LOAD}) from 12 V supply

High output current

Linear output current of 250 mA peak

Low distortion

−100 dBc typical at 200 kHz

−76 dBc typical at 4 MHz

−66 dBc typical at 8 MHz

−56 dBc typical at 16 MHz

Low quiescent current

15 mA total

High speed

200 MHz bandwidth (A_{V DIFF} = +2 dB, −3 dB)

900 V/μs slew rate (R_{LOAD} = 50 Ω)

APPLICATIONS

VDSL line driver

Consumer xDSL modems

Twisted pair line drivers

GENERAL DESCRIPTION

The AD8398 comprises two high-speed current feedback operational amplifiers. The high output current, high bandwidth, and fast slew rate make it particularly well suited as the line driver in VDSL and VDSL2 applications. The AD8398 is available in a thermally enhanced 4 mm × 4 mm, 16-lead LFCSP.

PIN CONFIGURATION

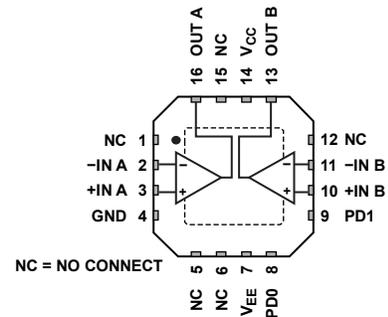


Figure 1. Thermally Enhanced, 4 mm × 4 mm, 16-Lead LFCSP_VQ

TYPICAL APPLICATION

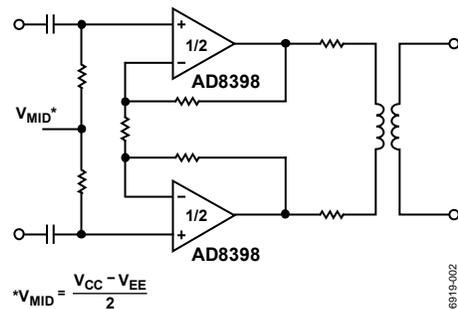


Figure 2. Typical PLC Driver Application

$$*V_{MID} = \frac{V_{CC} - V_{EE}}{2}$$

The AD8398 incorporates power management functionality via two CMOS-compatible control pins, PD0 and PD1. These pins select one of four operating modes: full power, medium power, low power, and complete power down. In the power-down mode, the quiescent current drops to 1.2 mA.

The AD8398 operates in the extended industrial temperature range of −40°C to +85°C.

For more information about the AD8398 email: amplifiers.comparators@analog.com.

Rev. Sp0

Information furnished by Analog Devices is believed to be accurate and reliable. However, no responsibility is assumed by Analog Devices for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Specifications subject to change without notice. No license is granted by implication or otherwise under any patent or patent rights of Analog Devices. Trademarks and registered trademarks are the property of their respective owners.

One Technology Way, P.O. Box 9106, Norwood, MA 02062-9106, U.S.A.

Tel: 781.329.4700

Fax: 781.461.3113

www.analog.com

©2007 Analog Devices, Inc. All rights reserved.

AD8398

NOTES