Single Port VDSL2 Line Driver with Shutdown

AD8398A

FEATURES

- Voltage feedback
- Wide output swing
  - 18.4 V p-p differential, R_{LOAD} = 20 Ω from 12 V supply
- High output current
  - Linear output current of 450 mA peak
- Low distortion
  - −65 dBc for Profile 8b @ 20.4 dBm
  - −55 dBc for Profile 17a @ 14.5 dBm
- High speed
  - 85 MHz bandwidth ($A_{V\ DIFF}$ = 5)

APPLICATIONS

- ADSL2+/VDSL2 CO/CPE line driver
- PLC line driver
- Consumer xDSL modems
- Twisted pair line drivers

FUNCTIONAL BLOCK DIAGRAM

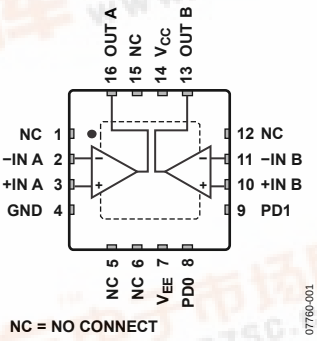

Figure 1. Thermally Enhanced, 4 mm × 4 mm, 16-Lead LFCSP_WQ

TYPICAL APPLICATION DIAGRAM

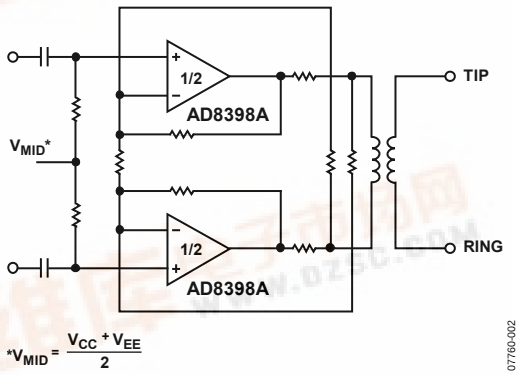

Figure 2. Typical VDSL2 Application

GENERAL DESCRIPTION

The AD8398A comprises two high-speed voltage feedback operational amplifiers. When configured as a differential line driver, the AD8398A is an ideal choice for ADSL2+, VDSL2, and power line communications (PLC) applications. It has high output current, high bandwidth, and fast slew rate, combined with exceptional MTPR and common-mode stability. The AD8398A is available in a thermally enhanced 4 mm × 4 mm, 16-lead LFCSP.

The AD8398A 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, or complete power-down. In the power-down mode, the quiescent current drops to 0.7 mA.

The AD8398A operates in the extended industrial temperature range of −40°C to +85°C.

For more information about the AD8398A, email: broadbandproducts@analog.com.

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NOTES

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