Data Sheet | February 26, 2008 | FN7522.2

## xDSL Differential Line Driver

The ISL1557 is a dual operational amplifier designed for VDSL2 and ADSL line driving in DMT based solutions. This device features a high drive capability of 750mA while consuming only 6mA of supply current per amplifier and operating from a single 4.5V to 12V supply. The driver achieves a typical distortion of -80dBc, at 150kHz into a 25Ω load.

The ISL1557 is available in the thermally-enhanced 16 Ld QFN and 10 Ld HMSOP package and is specified for operation over the full -40°C to +85°C temperature range. The ISL1557 has control pins $C_0$ and $C_1$ for controlling the bias and enable/disable of the outputs. These controls allow for lowering the power to fit the performance/power ratio for the application.

The ISL1557 is ideal for ADSL2+, SDSL, HDSL2 and VDSL line driving applications, including both 14.5dBm and 21dBm applications.

Get Full Datasheet

## Features

- 21dBm output power capability
- Drives up to 750mA from a +12V supply
- $20V_{P-P}$ differential output drive into 21Ω
- -80dBc typical driver output distortion at full output at 150kHz
- -75dBc typical driver output distortion at 4MHz
- -71dBc typical driver output distortion at 10MHz
- -75dBc typical driver output distortion at 17MHz
- Low quiescent current of 6mA per amplifier
- Supply range
  - For ISL1557IUEZ 4.5V to 12V
  - For ISL1557IRZ ±2.25V to ±6V, 4.5V to 12V
- 300MHz bandwidth
- Thermal shutdown
- Pb-free (RoHS compliant)

## Applications

- VDSL2 line drivers
- Power line communications line drivers
- ADSL2+ CPE line driving
- G.SHDSL, HDSL2 line drivers

## Ordering Information

| PART NUMBER (Note) | PART MARKING | TEMP. RANGE (°C) | PACKAGE (Pb-Free) | PKG. DWG. # |
|---|---|---|---|---|
| ISL1557IRZ | 155 7IRZ | -40 to +85 | 16 Ld 4x4 QFN | MDP0046 |
| ISL1557IRZ-T7* | 155 7IRZ | -40 to +85 | 16 Ld 4x4 QFN (Tape and Reel) | MDP0046 |
| ISL1557IUEZ | BBVAA | -40 to +85 | 10 Ld HMSOP | MDP0050 |
| ISL1557IUEZ-T7* | BBVAA | -40 to +85 | 10 Ld HMSOP (Tape and Reel) | MDP0050 |

*Please refer to TB347 for details on reel specifications

NOTE: These Intersil Pb-free plastic packaged products employ special Pb-free material sets; molding compounds/die attach materials and 100% matte tin plate PLUS ANNEAL - e3 termination finish, which is RoHS compliant and compatible with both SnPb and Pb-free soldering operations. Intersil Pb-free products are MSL classified at Pb-free peak reflow temperatures that meet or exceed the Pb-free requirements of IPC/JEDEC J STD-020.



CAUTION: These devices are sensitive to electrostatic discharge; follow proper IC Handling Procedures.
1-888-INTERSIL or 1-888-468-3774 | Intersil (and design) is a registered trademark of Intersil Americas Inc.
Copyright © Intersil Americas Inc. 2006, 2007. All Rights Reserved.
All other trademarks mentioned are the property of their respective owners.

All Intersil U.S. products are manufactured, assembled and tested utilizing ISO9000 quality systems.
Intersil Corporation's quality certifications can be viewed at www.intersil.com/design/quality

*Intersil products are sold by description only. Intersil Corporation reserves the right to make changes in circuit design, software and/or specifications at any time without notice. Accordingly, the reader is cautioned to verify that data sheets are current before placing orders. Information furnished by Intersil is believed to be accurate and reliable. However, no responsibility is assumed by Intersil or its subsidiaries for its use; nor for any infringements of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Intersil or its subsidiaries.*

For information regarding Intersil Corporation and its products, see www.intersil.com