

ISL1532A

Dual Channel Fixed Gain Differential DSL Line Driver

FN6369

Rev 3.00

December 12, 2006

The ISL1532A is a dual channel differential amplifier designed for driving full rate ADSL2+ signals at very low power dissipation. The high drive capability of 450mA makes this driver ideal for DMT designs. It contains two pairs of wideband, high-voltage, current mode feedback amplifiers designed on Intersil's HS30 Bipolar SOI process for low power consumption in DSL systems. The amplifiers have an internal fixed gain, which helps eliminate both feedback and gain resistors reducing board size and cost.

These drivers achieve an MTPR distortion measurement of better than 70dB, while consuming typically 5mA per DSL channel of total supply current. This supply current can be set using a resistor on the I_{ADJ} pin. Two other pins (C₀ and C₁) can also be used to adjust supply current to one of four pre-set modes (full-I_S, 3/4-I_S, 1/2-I_S, and full power-down). C₀ and C₁ inputs are design to pull high initially. Floating these inputs will put the device in disable mode. This is contrary to EL1528 where C₀ and C₁ inputs pull low initially and is in the enable state when C₀ and C₁ pins are floated.

The device is supplied in a thermally-enhanced 20 Ld HTSSOP and the small footprint (4x5mm) 24 Ld QFN packages. The ISL1532A is specified for operation over the full -40°C to +85°C temperature range.

The ISL1532A provides larger output swing at heavy loads, higher slew rate, and higher bandwidth while maintaining pin-to-pin drop-in compatibility with the EL1528. The

ISL1532A integrates 50k pull-up resistors on C₀ and C₁ pins.

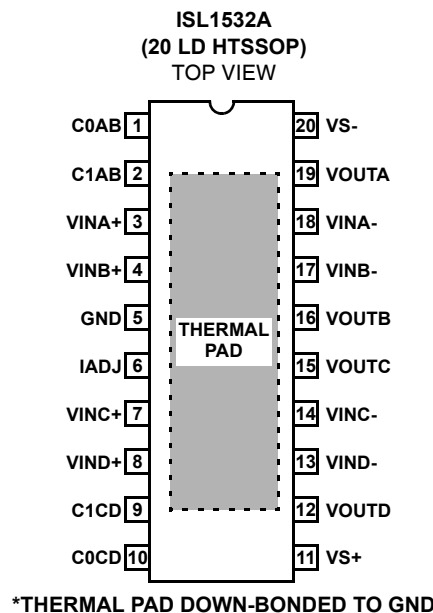
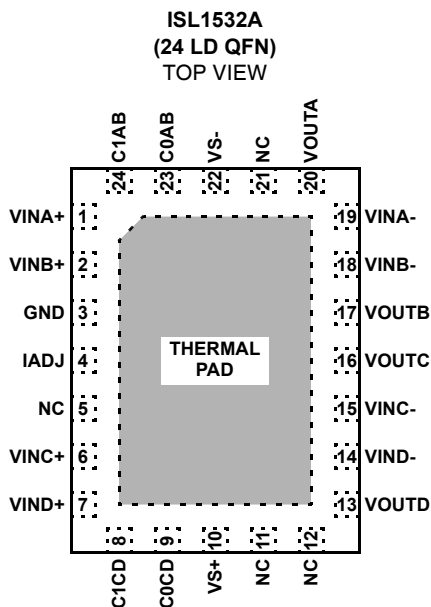
Features

- 450mA output drive capability
- 44.4V_{P-P} differential output drive into 100Ω
- ±5V to ±15V supply operation
- Internal fixed gain
- MTPR of -70dB
- Operates down to 2mA per amplifier supply current
- Current control pins
- Channel separation
 - 80dB @ 500kHz
 - 75dB @ 1MHz
- Direct pin-to-pin replacement for EL1528
- Pb-free plus anneal available (RoHS compliant)

Applications

- Dual port ADSL line drivers
- HDSL line drivers
- VDSL line driver

Pinouts



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