Data Sheet | February 9, 2005 | FN7013.1

Medium Power Differential Line Driver

The EL1507 is a very low power dual operational amplifier designed for central office and customer premise line driving for DMT ADSL solutions. This device features a high drive capability of 400mA while consuming only 7.5mA of supply current per amplifier from ±12V supplies. This driver achieves a typical distortion of less than -75dBc, at 1MHz into a 50Ω load. The EL1507 is available in the thermally-enhanced 16-pin SO package, as well as a 16-pin QFN package. Both are specified for operation over the full -40°C to +85°C temperature range.

The EL1507 has two control pins, C_0 and C_1. With the selection of C_0 and C_1, the device can be set into full-I_S power, ¾-I_S power, ½-I_S power, and power down disable modes. The EL1507 maintains excellent distortion and load driving capabilities even in the lowest power settings.

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Features

- Drives 360mA at $16V_{P-P}$ on ±12V supplies
- $40V_{P-P}$ differential output drive into 100Ω
- -75dBc typical driver output distortion driving 50Ω at 1MHz and ½-I_S bias current
- Low quiescent current of 3.5mA per amplifier in ½-I_S mode
- Power down disable mode
- Pb-Free available (RoHS compliant)

Applications

- ADSL G.DMT and G.lite CO line driving
- G.SHDSL, HDSL2 line driver
- ADSL CPE line driving
- Video distribution amplifier
- Video twisted-pair line driver

Ordering Information

PART NUMBER	PACKAGE	TAPE & REEL	PKG. DWG. #
EL1507CS	16-Pin SO	-	MDP0027
EL1507CS-T7	16-Pin SO	7”	MDP0027
EL1507CS-T13	16-Pin SO	13”	MDP0027
EL1507CSZ (See Note)	16-Pin SO (Pb-free)	-	MDP0027
EL1507CSZ-T7 (See Note)	16-Pin SO (Pb-free)	7”	MDP0027
EL1507CSZ-T13 (See Note)	16-Pin SO (Pb-free)	13”	MDP0027
EL1507CL	16-Pin QFN	-	MDP0046
EL1507CL-T7	16-Pin QFN	7”	MDP0046
EL1507CL-T13	16-Pin QFN	13”	MDP0046

NOTE: Intersil Pb-free products employ special Pb-free material sets; molding compounds/die attach materials and 100% matte tin plate termination finish, which are 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.
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