Data Sheet | February 10, 2005 | FN7016.1

Medium Power Differential Line Driver

The EL1511 is a dual operational amplifier designed for customer premise line driving in DMT ADSL solutions. This device features a high drive capability of 360mA while consuming only 7.5mA of supply current per amplifier and operating from a single 5V to 15V supply. This driver achieves a typical distortion of less than -85dBc, at 150kHz into a 25Ω load. The EL1511 is available in the thermally-enhanced 16-pin SO (0.150") and a 16-pin QFN (4x4mm) packages. The EL1511 is specified for operation over the full -40°C to +85°C temperature range. Electrical characteristics are given for typical 15V supply operation.

The EL1511 has two control pins, C_0 and C_1, which allow the selection of full I_S power, ¾-I_S, ½-I_S, and power-down modes.

The EL1511 is ideal for ADSL, SDSL, and HDSL2 line driving applications for single power supply, high voltage swing, and low power.

The EL1511 maintains excellent distortion and load driving capabilities even in the lowest power settings.

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Features

- Drives up to 360mA from a +15V supply
- $24V_{P-P}$ differential output drive into 25Ω and $26V_{P-P}$ differential output drive into 100Ω
- -85dBc typical driver output distortion at full output at 150kHz
- Low quiescent current of 3.5mA per amplifier at ½-I_S current mode
- Disable down to 1.5mA
- Pb-Free available (RoHS compliant)

Applications

- ADSL CSA line driving
- ADSL full rate CPE line driving
- G.SHDSL, HDSL2 line driver
- Video distribution amplifier
- Video twisted-pair line driver

Ordering Information

PART NUMBER	PACKAGE	TAPE & REEL	PKG. DWG. #
EL1511CS	16-Pin SO (0.150")	-	MDP0027
EL1511CS-T7	16-Pin SO (0.150")	7"	MDP0027
EL1511CS-T13	16-Pin SO (0.150")	13"	MDP0027
EL1511CSZ (See Note)	16-Pin SO (0.150") (Pb-free)	-	MDP0027
EL1511CSZ-T7 (See Note)	16-Pin SO (0.150") (Pb-free)	7"	MDP0027
EL1511CSZ-T13 (See Note)	16-Pin SO (0.150") (Pb-free)	13"	MDP0027
EL1511CL	16-Pin QFN	-	MDP0046
EL1511CL-T7	16-Pin QFN	7"	MDP0046
EL1511CL-T13	16-Pin QFN	13"	MDP0046
EL1511CLZ (See Note)	16-Pin QFN (Pb-free)	-	MDP0046
EL1511CLZ-T7 (See Note)	16-Pin QFN (Pb-free)	7"	MDP0046
EL1511CLZ-T13 (See Note)	16-Pin QFN (Pb-free)	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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