

Differential DSL Line Driver

The EL1508 is designed for driving full rate ADSL signals in both CO and CPE applications at very low power dissipation. The high drive capability of 450mA makes this driver ideal for both CAP and DMT designs. It contains two wideband, high-voltage, current mode feedback amplifiers with a number of power dissipation reduction features.

These drivers achieve an MTPR distortion measurement of better than 70dB, while consuming typically 6mA of total supply current. This supply current can be set using a resistor on the I_{ADJ} pin. Two other pins (C₀ & C₁) can also be used to adjust supply current to one of four pre-set modes (full-I_S, 2/3-I_S, 1/3-I_S, and full power-down). The EL1508 operates on ±5V to ±12V supplies and retains its bandwidth and linearity over the complete supply range.

The device is supplied in a thermally-enhanced 20-pin SO (0.300"), a thermally-enhanced 16-pin SO (0.150"), and the small footprint (4x5mm) 24-pin QFN packages. The EL1508 is specified for operation over the full -40°C to +85°C temperature range.

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Features

- 450mA output drive capability
- 43.6V_{P-P} differential output drive into 100Ω
- 2nd/3rd harmonics of -85dBc/-75dBc
- MTPR of -70dB
- Operates down to 3mA per amplifier supply current
- Power control features
- Pin-compatible with EL1503
- Pb-free available

Applications

- ADSL line driver
- HDSL line driver
- Video distribution amplifier
- Video twisted-pair line driver

Ordering Information

PART NUMBER	PACKAGE	TAPE & REEL	PKG. DWG. #
EL1508CS	16-Pin SO (0.150")	-	MDP0027
EL1508CS-T7	16-Pin SO (0.150")	7"	MDP0027
EL1508CS-T13	16-Pin SO (0.150")	13"	MDP0027
EL1508CSZ (See Note)	16-Pin SO (0.150") (Pb-free)	-	MDP0027
EL1508CSZ-T7 (See Note)	16-Pin SO (0.150") (Pb-free)	7"	MDP0027
EL1508CSZ-T13 (See Note)	16-Pin SO (0.150") (Pb-free)	13"	MDP0027
EL1508CM	20-Pin SO (0.300")	-	MDP0027
EL1508CM-T13	20-Pin SO (0.300")	13"	MDP0027
EL1508CL	24-Pin QFN	-	MDP0046
EL1508CL-T7	24-Pin QFN	7"	MDP0046
EL1508CL-T13	24-Pin QFN	13"	MDP0046
EL1508CLZ (See Note)	24-Pin QFN (Pb-free)	-	MDP0046
EL1508CLZ-T7 (See Note)	24-Pin QFN (Pb-free)	7"	MDP0046
EL1508CLZ-T13 (See Note)	24-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 is 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-020B.

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