

## EL1517

xDSL Differential Line Driver

**OBSOLETE PRODUCT**  
**NO RECOMMENDED REPLACEMENT**  
**contact our Technical Support Center at**  
**1-888-INTERSIL or www.intersil.com/tsc**

FN7425  
 Rev 4.00  
 August 8, 2006

The EL1517 is a dual operational amplifier designed for VDSL and ADSL line driving in DMT based solutions. This device features a high drive capability of 250mA while consuming only 7mA of supply current per amplifier and operating from a single 5V to 12V supply. This driver achieves a typical distortion of -80dBc, at 150kHz into a 25Ω load.

The EL1517 is available in the industry-standard 8 Ld SOIC and the thermally-enhanced 16 Ld QFN packages. All are specified for operation over the full -40°C to +85°C temperature range. The 16 Ld QFN package option has control pins C<sub>0</sub> and C<sub>1</sub> 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 EL1517 is ideal for ADSL, SDSL, HDSL2 and VDSL line driving applications.

### Ordering Information

| PART NUMBER          | PART MARKING | PACKAGE               | TAPE & REEL | PKG. DWG. # |
|----------------------|--------------|-----------------------|-------------|-------------|
| EL1517IS             | 1517IS       | 8 Ld SOICIC           | -           | MDP0027     |
| EL1517IS-T7          | 1517IS       | 8 Ld SOICIC           | 7"          | MDP0027     |
| EL1517IS-T13         | 1517IS       | 8 Ld SOICIC           | 13"         | MDP0027     |
| EL1517ISZ (Note)     | 1517ISZ      | 8 Ld SOICIC (Pb-Free) | -           | MDP0027     |
| EL1517ISZ-T7 (Note)  | 1517ISZ      | 8 Ld SOICIC (Pb-Free) | 7"          | MDP0027     |
| EL1517ISZ-T13 (Note) | 1517ISZ      | 8 Ld SOIC (Pb-Free)   | 13"         | MDP0027     |
| EL1517IL             | 1517IL       | 16 Ld QFN             | -           | MDP0046     |
| EL1517IL-T7          | 1517IL       | 16 Ld QFN             | 7"          | MDP0046     |
| EL1517IL-T13         | 1517IL       | 16 Ld QFN             | 13"         | MDP0046     |
| EL1517ILZ (Note)     | 1517ILZ      | 16 Ld QFN (Pb-Free)   | -           | MDP0046     |
| EL1517ILZ-T7 (Note)  | 1517ILZ      | 16 Ld QFN (Pb-Free)   | 7"          | MDP0046     |
| EL1517ILZ-T13 (Note) | 1517ILZ      | 16 Ld QFN (Pb-Free)   | 13"         | MDP0046     |

NOTE: Intersil Pb-free plus anneal 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.

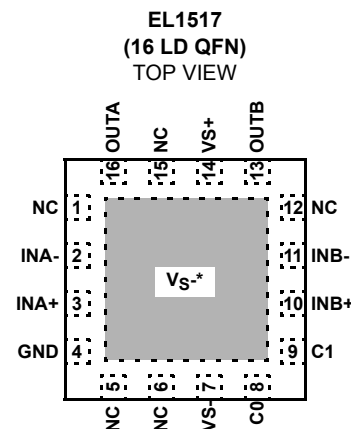
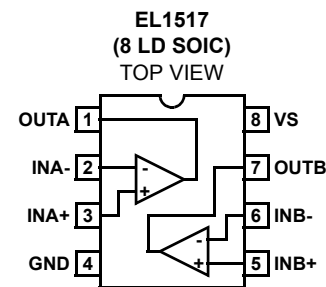
### Features

- Drives up to 250mA from a +12V supply
- 18V<sub>P-P</sub> differential output drive into 50Ω
- 20V<sub>P-P</sub> differential output drive into 100Ω
- -80dBc typical driver output distortion at full output at 150kHz
- -75dBc typical driver output distortion at 3.75MHz
- -60dBc typical driver output distortion at 8MHz
- -50dBc typical driver output distortion at 16MHz
- Low quiescent current of 7mA per amplifier
- 200MHz bandwidth
- Use for single or dual supply applications
- Pb-free plus anneal available (RoHS compliant)

### Applications

- VDSL line drivers
- ADSL full rate CPE line driving
- G.SHDSL, HDSL2 line drivers
- HomePlug networking drivers

### Pinouts



\*THERMAL PAD MUST BE CONNECTED TO NEGATIVE SUPPLY: VS<sub>-</sub>. QFN PACKAGE CAN BE USED IN DUAL SUPPLY APPLICATIONS.

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