

Power Line Communication (PLC)

The ISL1571 is a dual operational amplifier designed for PLC line driving in OFDM and SSC based solutions. This device features a high drive capability of 750mA while consuming only 6mA of supply current per amplifier and operating from a single 4.5V to 12V supply. The driver achieves a typical distortion of -80dBc, at 150kHz into a 25 Ω load.

The ISL1571 is available in the thermally-enhanced 16 Ld QFN or 10 Ld HMSOP package and is specified for operation over the full -40°C to +85°C temperature range. The ISL1571 has control pins BIAS₀ and BIAS₁ 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 ISL1571 is ideal for line driving applications following the Homeplug 1.0, Homeplug AV and UPA standard based PLC.

Get Full Datasheet

Features

- 21dBm output power capability
- Drives up to 750mA from a +12V supply
- 20V_{P-P} differential output drive into 21 Ω
- Very low noise floor
- -75dBc typical driver output distortion at 4MHz
- -80dBc typical driver output distortion at 10MHz
- -79dBc typical driver output distortion at 17MHz
- Low quiescent current of 6mA per amplifier
- Supply range
 - For ISL1571IUEZ 4.5V to 12V
 - For ISL1571IRZ $\pm 2.25V$ to $\pm 6V$, 4.5V to 12V
- 250MHz bandwidth
- Thermal shutdown
- Pb-free (RoHS compliant)

Applications

- Homeplug 1.0
- Homeplug AV
- UPA digital home standard

Ordering Information

PART NUMBER (Note)	PART MARKING	TEMP. RANGE (°C)	PACKAGE (Pb-Free)	PKG. DWG. #
ISL1571IRZ	157 1IRZ	-40 to +85	16 Ld QFN	MDP0046
ISL1571IRZ-T7*	157 1IRZ	-40 to +85	16 Ld QFN (Tape and Reel)	MDP0046
ISL1571IUEZ	BBBDA	-40 to +85	10 Ld HMSOP	MDP0050
ISL1571IUEZ-T7*	BBBDA	-40 to +85	10 Ld HMSOP (Tape and Reel)	MDP0050

*Please refer to TB347 for details on reel specifications

NOTE: These Intersil Pb-free plastic packaged products employ special Pb-free material sets, molding compounds/die attach materials, and 100% matte tin plate plus anneal (e3 termination finish, which is 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.

All Intersil U.S. products are manufactured, assembled and tested utilizing ISO9000 quality systems.
Intersil Corporation's quality certifications can be viewed at www.intersil.com/design/quality

Intersil products are sold by description only. Intersil Corporation reserves the right to make changes in circuit design, software and/or specifications at any time without notice. Accordingly, the reader is cautioned to verify that data sheets are current before placing orders. Information furnished by Intersil is believed to be accurate and reliable. However, no responsibility is assumed by Intersil or its subsidiaries for its use; nor for any infringements of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Intersil or its subsidiaries.

For information regarding Intersil Corporation and its products, see www.intersil.com