

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 25Ω 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.

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Features

- 21dBm output power capability
- Drives up to 750mA from a +12V supply
- 20V_{P-P} differential output drive into 21Ω
- 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 ±2.25V to ±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.

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