

Plan 9 is offering a Power Line Communications (PLC) Narrow-band (0-500kHz) Transmitter Line Driver IP block designed to drive the low impedance loads with outstanding MTPR (Multi-Tone Power Ratio) performance while driving OFDM signals.

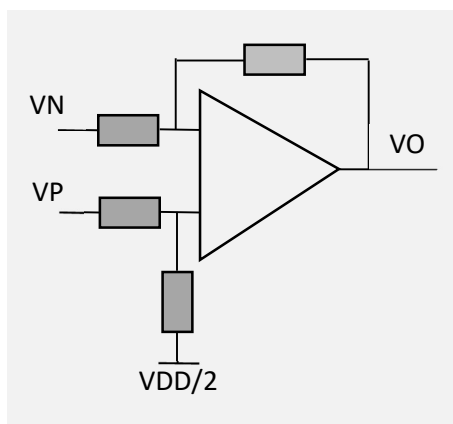
Applications include:

- All PLC related standards
- Smart power meter communications
- Smart House controls

Features of this Line Driver IP:

- 3 Amp output @ VDD-2V
- >500KHz Full Power Bandwidth
- Fully Differential Input and Single ended Output
- Switchable hi-impedance output mode
- Fixed Gain of 8V/V
- <50mA idle current
- VDD range is 10V to 24V
- Programmable Short circuit Protection
- IP cell area is less than 1.5mm²

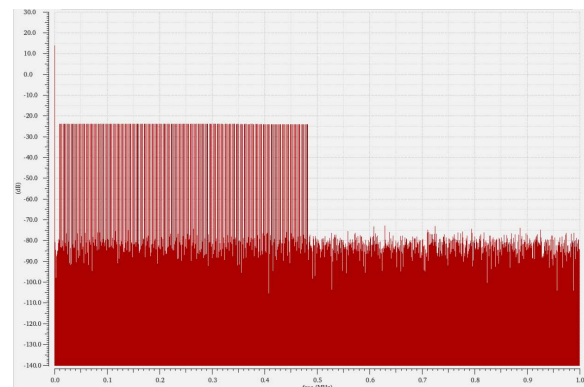
Block Diagram of Transmitter



Performance:

Below is an FFT simulation of the transmitter driving a 1 Ohm load with peaks of 2.8V (2.8A) using over 200 tones over the approximately 500kHz bandwidth. The MTPR results included are tone amplitude, worst bin, and average MTPR. All dB calculations are in Volts.

Each tone: -23.9dB, Worst bin MTPR: 50dB, Avg MTPR: 59dB CF=4



Availability:

Currently this IP is on a multi-project wafer run and will be out for evaluation in Q2, 2020.

A more detailed datasheet is being constructed and can be available with a signed NDA.

Once the chips are out and tested, demos can be made available with restrictions.

IP is available for license or for sale.