Features

- Designed for HPAV2 Standard
- MIMO or SISO Operation
- Single Channel Operation
- Small 16-pin, 4x4 mm Package
- Low Power Operation
- Class GH Operation
- Supports HPAV2 Power Save Mode
- Channel Enable/Disable Control
- Capable of Driving Line Impedance Between 12 Ω to 100 Ω
- Operations to 86 MHz
- High Signal Level Operation
  - -54.5 dBm/Hz, 2 – 30 MHz
  - -85.0 dBm/Hz, 30 – 86 MHz
- +12 V Operation
- RoHS Compliant

Applications

- Power Line Communications
- Home Networking
- HPNA
- G.HN

Description

The Le87401 is a single channel line driver designed to work in Home Plug Alliance HPAV2 systems, G.HN and MOCA.

This single channel device can be used for single-in, single-out (SISO) operation. Potentially, two single-channel devices can work together for multiple-in, multiple-out (MIMO) operation.

The Le87401 can drive a line impedance of 100 Ω down to 12 Ω through a proper transformer and delivers superior performance with power efficiency using Class GH operation.

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Ordering Information

Le87401NQC	16-pin QFN Green Pkg.	Tray

The green package is Halogen free and meets RoHS Directive 2002/95/EC of the European Council to minimize the environmental impact of electrical equipment.

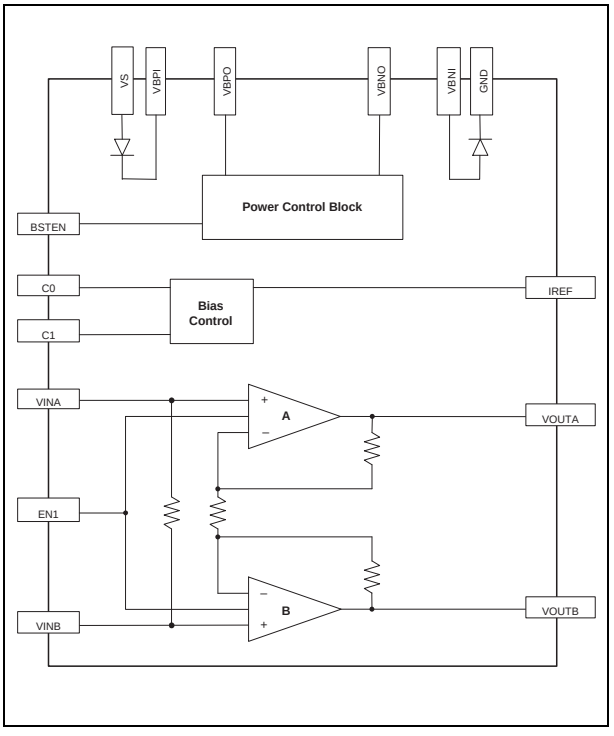


Figure 1 - Block Diagram

Applications

The Le87401 integrates two high-power line driver amplifiers. The amplifiers are designed for low distortion for signals up to 86 MHz. A typical PLC application is shown in Figure 2.

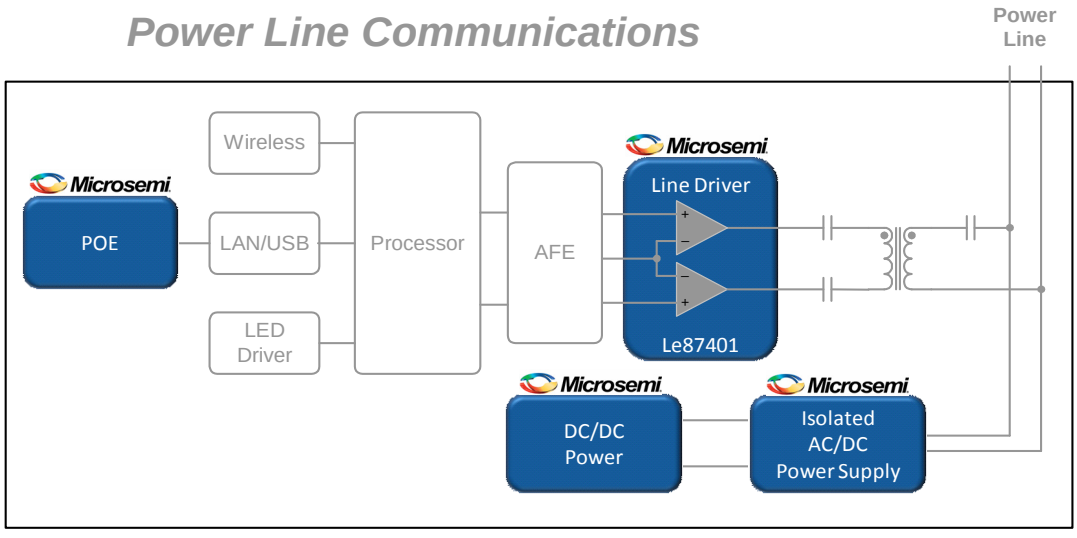


Figure 2 - PLC Application Diagram

Pin Diagrams

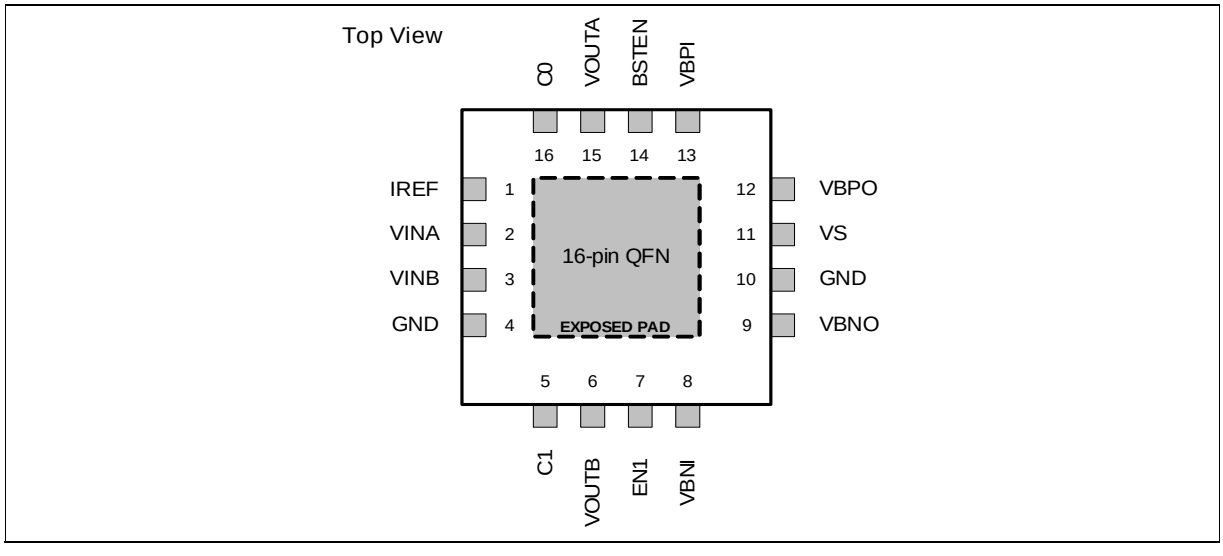
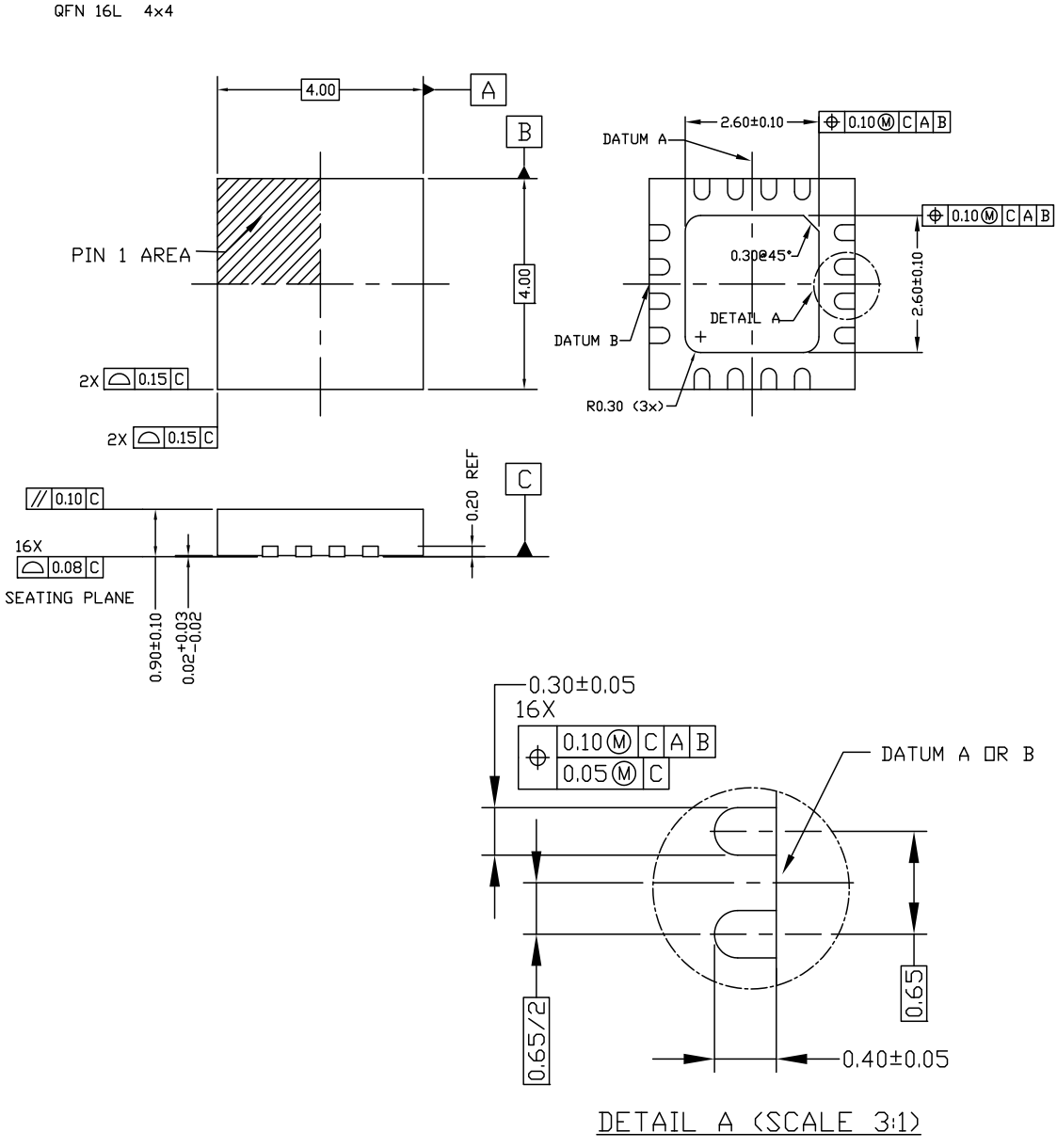


Figure 3 - 16-Pin QFN Diagram

The device incorporates an exposed die pad on the underside of its package. The pad acts as a heat sink and must be connected to a copper plane through thermal vias for proper heat dissipation. It is electrically isolated and may be connected to GND.

Physical Dimensions

16-pin QFN



NOTES:

1. DIMENSIONING AND TOLERANCE IS IN CONFORMANCE TO ASME Y14.5–1994
   ALL DIMENSIONS ARE IN MILLIMETERS ° IN DEGREES