



**THE DATASHEET OF
LE87401NQC**



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.

Version 2

May 2013

Document Number

146538

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.

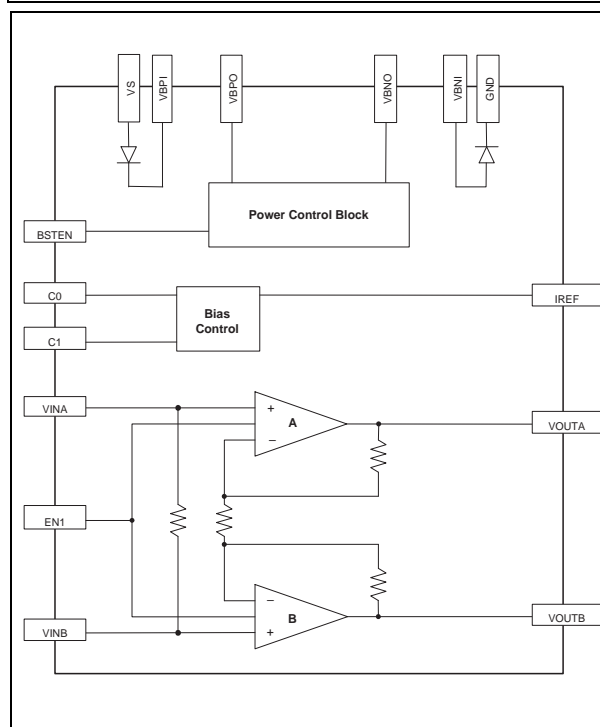


Figure 1 - Block Diagram

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.

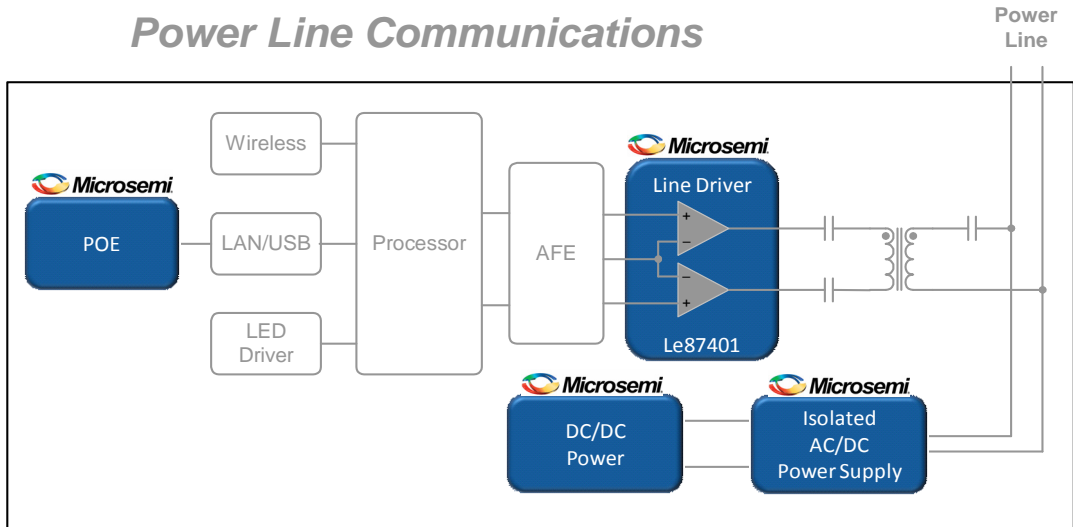


Figure 2 - PLC Application Diagram

Pin Diagrams

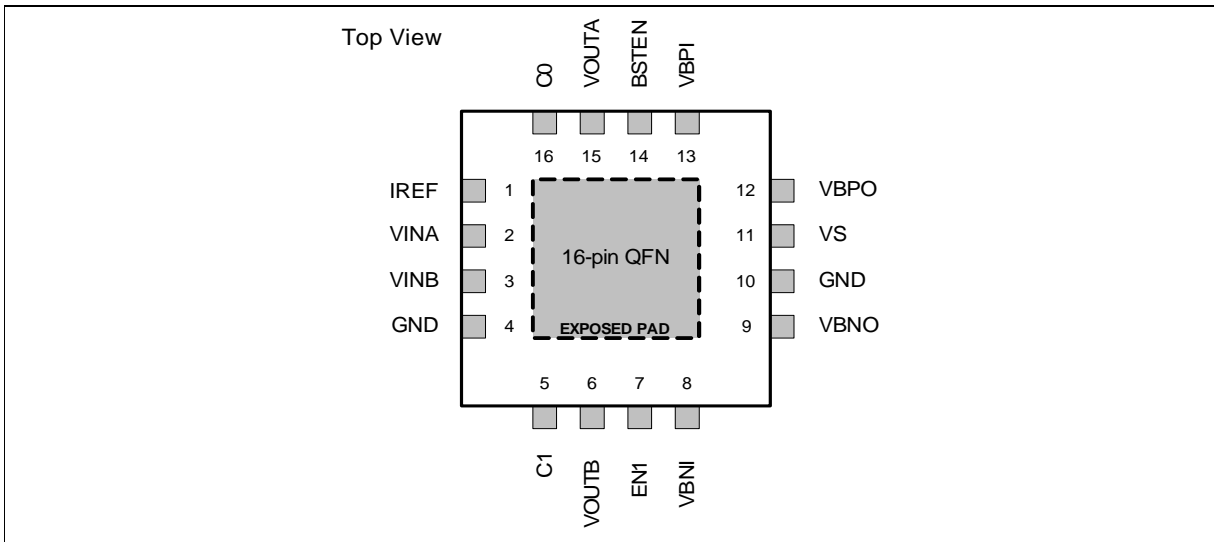


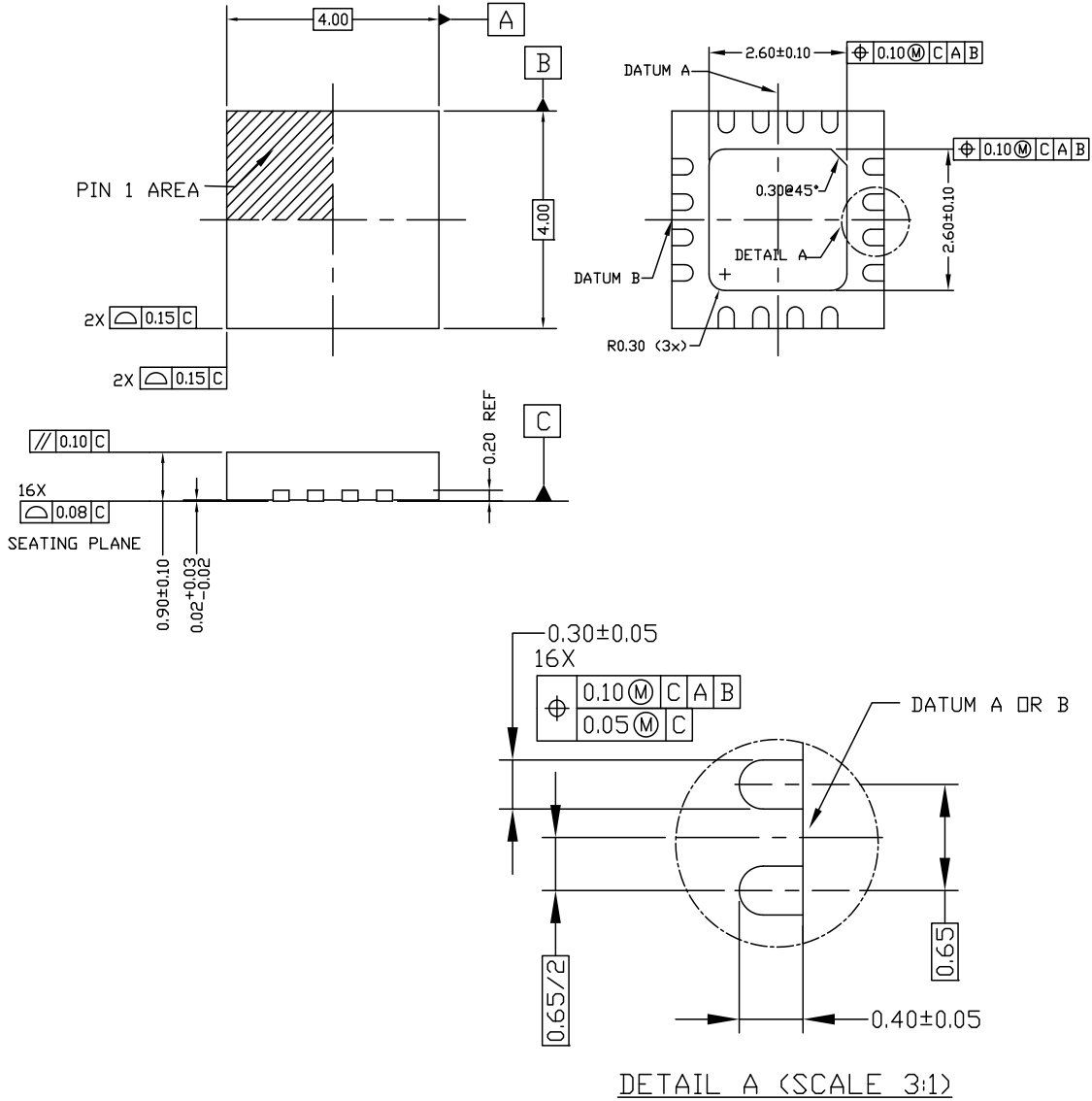
Figure 3 - 16-Pin QFN Diagram

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

QFN 16L 4x4



NOTES:

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

Information relating to products and services furnished herein by Microsemi Corporation or its subsidiaries (collectively "Microsemi") is believed to be reliable. However, Microsemi assumes no liability for errors that may appear in this publication, or for liability otherwise arising from the application or use of any such information, product or service or for any infringement of patents or other intellectual property rights owned by third parties which may result from such application or use. Neither the supply of such information or purchase of product or service conveys any license, either express or implied, under patents or other intellectual property rights owned by Microsemi or licensed from third parties by Microsemi, whatsoever. Purchasers of products are also hereby notified that the use of product in certain ways or in combination with Microsemi, or non-Microsemi furnished goods or services may infringe patents or other intellectual property rights owned by Microsemi.

This publication is issued to provide information only and (unless agreed by Microsemi in writing) may not be used, applied or reproduced for any purpose nor form part of any order or contract nor to be regarded as a representation relating to the products or services concerned. The products, their specifications, services and other information appearing in this publication are subject to change by Microsemi without notice. No warranty or guarantee express or implied is made regarding the capability, performance or suitability of any product or service. Information concerning possible methods of use is provided as a guide only and does not constitute any guarantee that such methods of use will be satisfactory in a specific piece of equipment. It is the user's responsibility to fully determine the performance and suitability of any equipment using such information and to ensure that any publication or data used is up to date and has not been superseded. Manufacturing does not necessarily include testing of all functions or parameters. These products are not suitable for use in any medical and other products whose failure to perform may result in significant injury or death to the user. All products and materials are sold and services provided subject to Microsemi's conditions of sale which are available on request.

**For more information about all Microsemi products
visit our website at
www.microsemi.com**

TECHNICAL DOCUMENTATION – NOT FOR RESALE



Microsemi

Microsemi Corporate Headquarters
One Enterprise, Aliso Viejo CA 92656 USA
Within the USA: +1 (949) 380-6100
Sales: +1 (949) 380-6136
Fax: +1 (949) 215-4996

Microsemi Corporation (NASDAQ: MSCC) offers a comprehensive portfolio of semiconductor solutions for: aerospace, defense and security; enterprise and communications; and industrial and alternative energy markets. Products include mixed-signal ICs, SoCs, and ASICs; programmable logic solutions; power management products; timing and voice processing devices; RF solutions; discrete components; and systems. Microsemi is headquartered in Aliso Viejo, Calif. Learn more at www.microsemi.com.

© 2013 Microsemi Corporation. All rights reserved. Microsemi and the Microsemi logo are trademarks of Microsemi Corporation. All other trademarks and service marks are the property of their respective owners.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View LE87401NQC on WIN SOURCE](#)

 [Microsemi Corporation](#) Information

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management