

## PRODUCT SUMMARY

# SKY77736 SkyHi™ Power Amplifier Module for LTE Band 20 (832–862 MHz)

### Applications

- Long-Term Evolution (LTE)
- Handsets and Data Cards

### Features

- QPSK, 16QAM modulations
- Band 20 linear power at 3.4 V
- Low voltage positive bias supply 3.0 V to 4.5 V
- Excellent linearity and efficiency
- Large dynamic range
- Small, low profile package
  - 3 mm x 3 mm x 0.9 mm
  - 10-pad configuration
- InGaP BiFET Technology



Skyworks Green™ products are compliant with all applicable legislation and are halogen-free. For additional information, refer to Skyworks *Definition of Green™*, document number SQ04-0074.

### Description

The SKY77736 SkyHi™ Power Amplifier Module (PAM) is a fully matched, surface mount module developed for LTE applications. This small and efficient module packs full coverage of LTE Band 20 into a single compact package. The SKY77736 meets the stringent spectral linearity requirements of LTE modulation with QPSK / 16QAM modulations from 5 MHz to 20 MHz bandwidth and full or partial resource block allocations with high power added efficiency.

The single Gallium Arsenide (GaAs) Microwave Monolithic Integrated Circuit (MMIC) contains all active circuitry in the module, including the PA, input, and interstage matching. Output match is realized off-chip within the module package to optimize efficiency and power performance into a 50  $\Omega$  load. The SKY77736 is manufactured with Skyworks' BiFET process which provides for all positive voltage DC supply operation while maintaining high efficiency and good linearity. Primary bias is supplied via the VCC1 pad directly from battery output in the 3.0 to 4.5 volt range. Amplifier collectors are supplied via the VCC2 pad. Power-down is accomplished by setting a logic low level on the VEN pad. No external supply side switch is needed as typical "off" leakage is a few microamperes with full primary voltage supplied from the battery. The VMODE0 and VMODE1 pads are used to switch between high, medium and low power modes to reduce current consumption and gain in the back-off conditions.

## Ordering Information

| Product Name                           | Order Number | Evaluation Board Part Number |
|----------------------------------------|--------------|------------------------------|
| SKY77736 SkyHi™ Power Amplifier Module | SKY77736-11  | EN40-D345-002                |

Copyright © 2013, Skyworks Solutions, Inc. All Rights Reserved.

Information in this document is provided in connection with Skyworks Solutions, Inc. ("Skyworks") products or services. These materials, including the information contained herein, are provided by Skyworks as a service to its customers and may be used for informational purposes only by the customer. Skyworks assumes no responsibility for errors or omissions in these materials or the information contained herein. Skyworks may change its documentation, products, services, specifications or product descriptions at any time, without notice. Skyworks makes no commitment to update the materials or information and shall have no responsibility whatsoever for conflicts, incompatibilities, or other difficulties arising from any future changes.

No license, whether express, implied, by estoppel or otherwise, is granted to any intellectual property rights by this document. Skyworks assumes no liability for any materials, products or information provided hereunder, including the sale, distribution, reproduction or use of Skyworks products, information or materials, except as may be provided in Skyworks Terms and Conditions of Sale.

THE MATERIALS, PRODUCTS AND INFORMATION ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE, INCLUDING FITNESS FOR A PARTICULAR PURPOSE OR USE, MERCHANTABILITY, PERFORMANCE, QUALITY OR NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT; ALL SUCH WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED. SKYWORKS DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. SKYWORKS SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO ANY SPECIAL, INDIRECT, INCIDENTAL, STATUTORY, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS THAT MAY RESULT FROM THE USE OF THE MATERIALS OR INFORMATION, WHETHER OR NOT THE RECIPIENT OF MATERIALS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Skyworks products are not intended for use in medical, lifesaving or life-sustaining applications, or other equipment in which the failure of the Skyworks products could lead to personal injury, death, physical or environmental damage. Skyworks customers using or selling Skyworks products for use in such applications do so at their own risk and agree to fully indemnify Skyworks for any damages resulting from such improper use or sale.

Customers are responsible for their products and applications using Skyworks products, which may deviate from published specifications as a result of design defects, errors, or operation of products outside of published parameters or design specifications. Customers should include design and operating safeguards to minimize these and other risks. Skyworks assumes no liability for applications assistance, customer product design, or damage to any equipment resulting from the use of Skyworks products outside of stated published specifications or parameters.

Skyworks, the Skyworks symbol, "Breakthrough Simplicity" and SkyH are trademarks or registered trademarks of Skyworks Solutions, Inc., in the United States and other countries. Third-party brands and names are for identification purposes only, and are the property of their respective owners. Additional information, including relevant terms and conditions, posted at [www.skyworksinc.com](http://www.skyworksinc.com), are incorporated by reference.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Skyworks:](#)  
[SKY77736-11](#)