

PRODUCT SUMMARY

SKY77735 Power Amplifier Module for CDMA (824 MHz–849 MHz)

Applications

- CDMA handsets

Features

- Low voltage positive bias supply 3.2 V to 4.2 V
- Good linearity
- High efficiency
 - 40% @ 27 dBm
- Large dynamic range
- Small, low profile package
 - 3 mm x 3 mm x 0.9 mm
 - 10-pad configuration
- Power down control
- InGaP
- Supports low collector voltage operation
- Digital Enable
- No V_{REF} required
- CMOS compatible control signals
- Integrated Directional Coupler

Description

The SKY77735 Power Amplifier Module (PAM) is a fully matched 10-pad surface mount module developed for Code Division Multiple Access (CDMA) applications. This small and efficient module packs full coverage of the 824–849 MHz bandwidth into a single compact package. Because high efficiencies are attained throughout the entire power range, the SKY77735 delivers unsurpassed talk-time advantages. A directional coupler is integrated into the module to eliminate the need for any external coupler.

The single Gallium Arsenide (GaAs) Microwave Monolithic Integrated Circuit (MMIC) contains all active circuitry in the module. The MMIC contains on-board bias circuitry, as well as input and interstage matching circuits. Output match into a 50-ohm load is realized off-chip within the module package to optimize efficiency and power performance.

The SKY77735 PAM is manufactured with Skyworks' InGaP GaAs Heterojunction Bipolar Transistor (HBT) BiFET process that provides for all positive voltage DC supply operation while maintaining high efficiency and good linearity. Primary bias to the SKY77735 is supplied directly from any suitable battery with an output in the 3.2 to 4.2 volt range. No VREF voltage is required. Power down is accomplished by setting the voltage on VENABLE to zero volts. No external supply side switch is needed as typical "off" leakage is a few microamperes with full primary voltage supplied from the battery.

Figure 1 is a functional block diagram of the SKY77735. Figure 2 shows the pad layout and pad names. Figure 3 is a mechanical diagram of the SKY77735 package dimensions.

NEW Skyworks Green™ products are RoHS (Restriction of Hazardous Substances)-compliant, conform to the EIA/EICTA/JEITA Joint Industry Guide (JIG) Level A guidelines, are halogen free according to IEC-61249-2-21, and contain < 1,000 ppm antimony trioxide in polymeric materials.

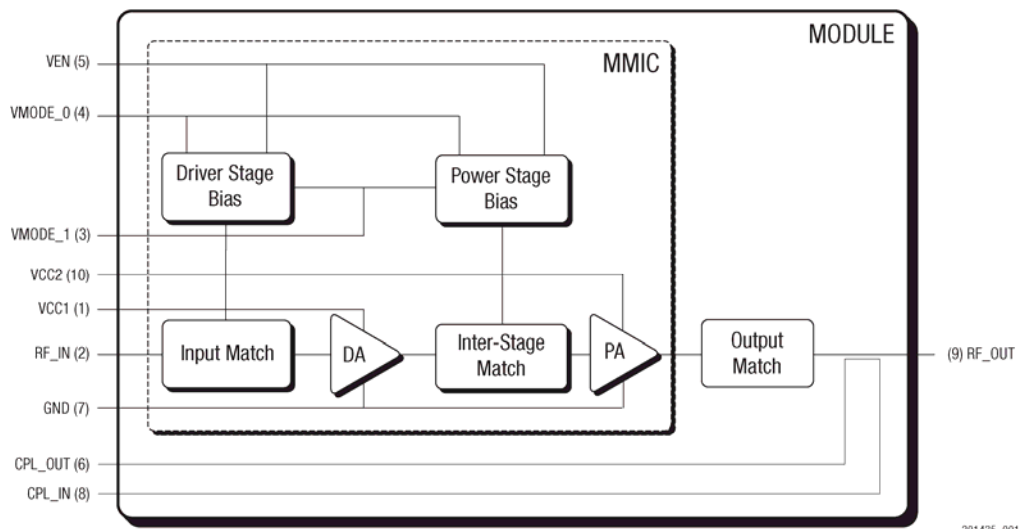



Figure 1. SKY77735 Functional Block Diagram

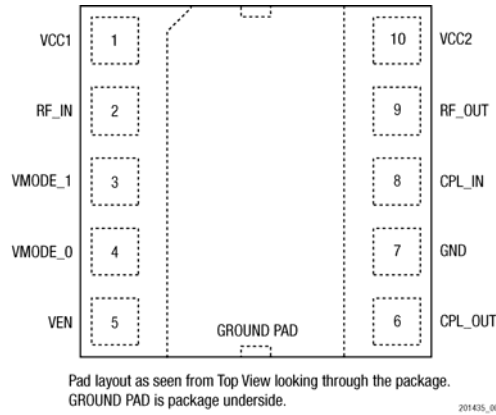
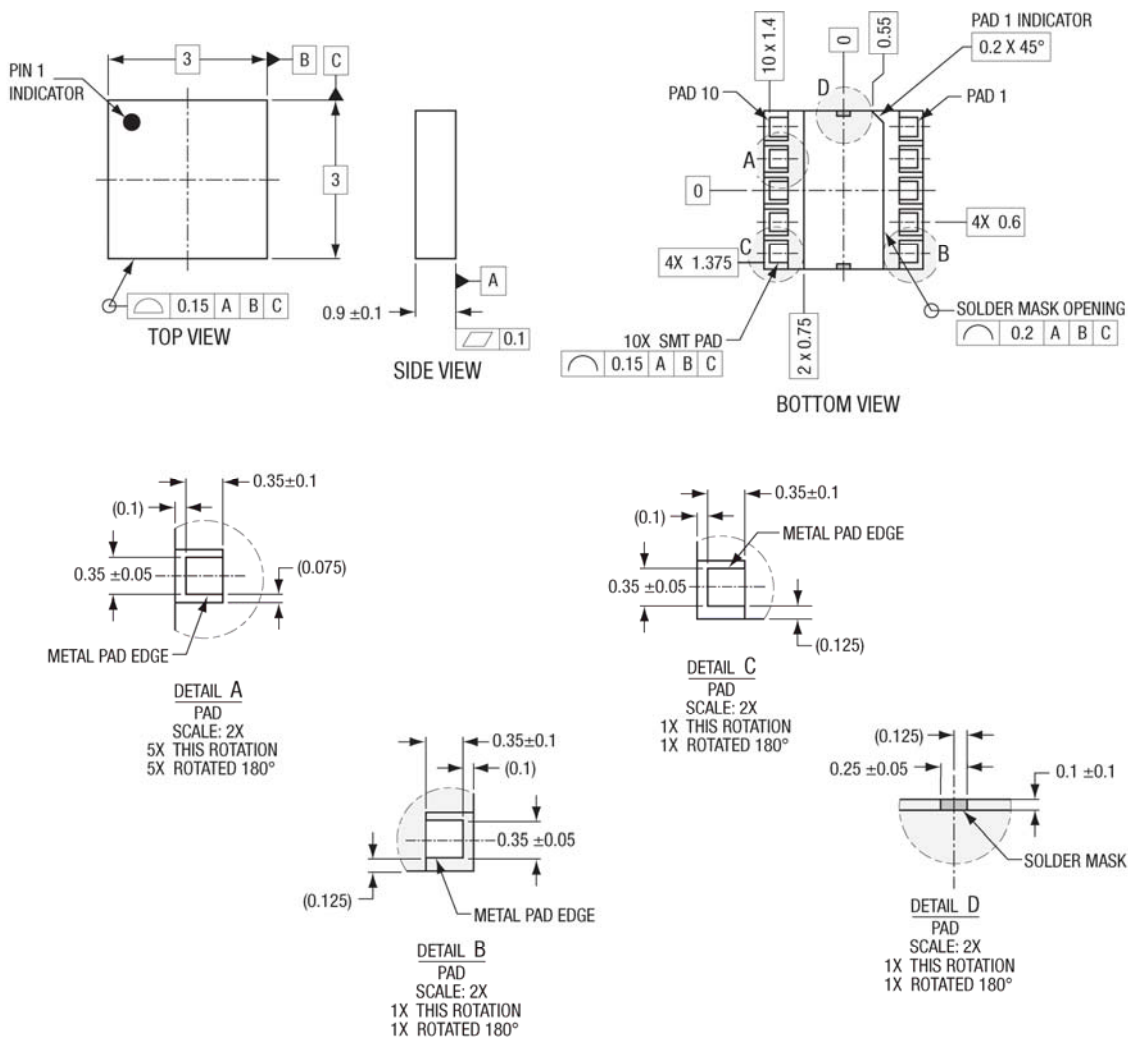


Figure 2. SKY77735 Pad Names and Configuration (Top View)



NOTES: Unless otherwise specified.
1. Dimensioning and Tolerancing in accordance with ASME Y14.5M-1994
2. All dimensions are in millimeters.

DS00109-2 REV 1 7/01/09
201435_003

Figure 3. Dimensional Diagram for 3 mm x 3 mm x 0.9 mm Package – SKY77735 Specific

Copyright © 2010, Skyworks Solutions, Inc. All Rights Reserved.

Information in this document is provided in connection with Skyworks Solutions, Inc. ("Skyworks") products. These materials 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. Skyworks may make changes to its documentation, products, specifications and product descriptions at any time, without notice. Skyworks makes no commitment to update the information and shall have no responsibility whatsoever for conflicts, incompatibilities, or other difficulties arising from future changes to its documentation, products, specifications and product descriptions.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by or under this document. Except as may be provided in Skyworks' Terms and Conditions of Sale for such products, Skyworks assumes no liability whatsoever in association with its documentation, products, specifications and product descriptions.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED OR OTHERWISE, RELATING TO SALE AND/OR USE OF SKYWORKS PRODUCTS INCLUDING WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, PERFORMANCE, QUALITY OR NON-INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. SKYWORKS FURTHER 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 SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS THAT MAY RESULT FROM THE USE OF THESE MATERIALS 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. 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.

The following are trademarks of Skyworks Solutions, Inc.: Skyworks®, the Skyworks logo®, and Breakthrough Simplicity®. Product names or services listed in this publication are for identification purposes only, and may be trademarks of Skyworks or other third parties. Third-party brands and names are the property of their respective owners. Additional information, posted at www.skyworksinc.com, is incorporated by reference.