

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.

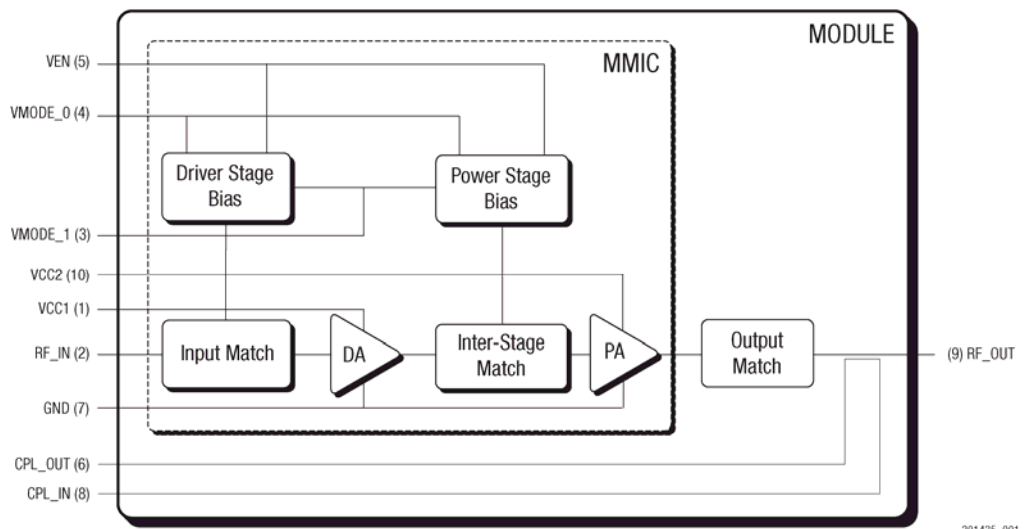



Figure 1. SKY77735 Functional Block Diagram

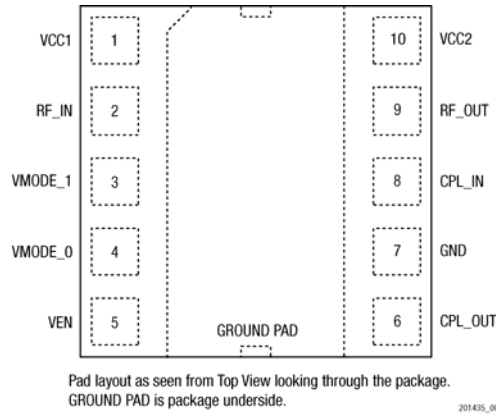
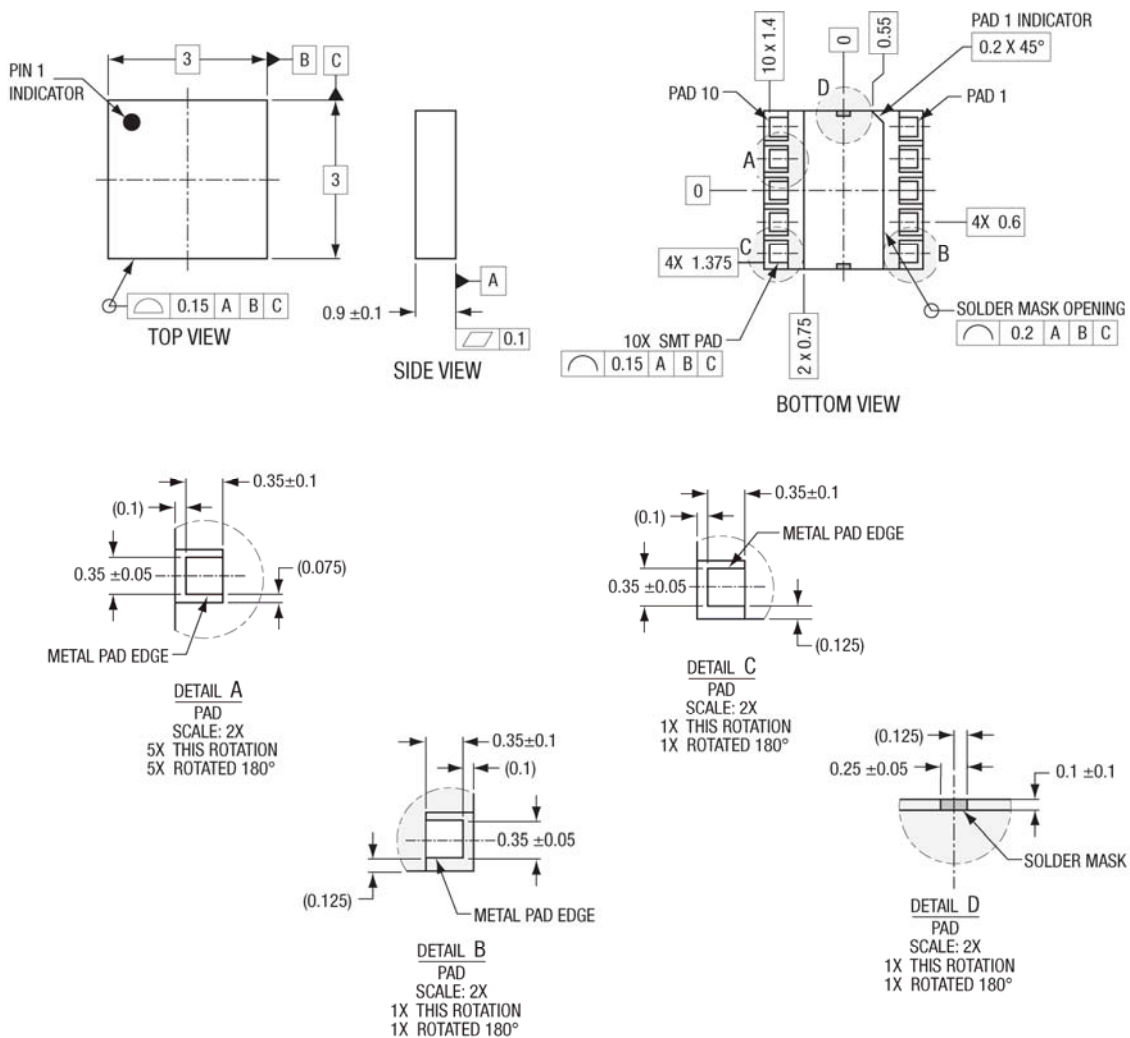


Figure 2. SKY77735 Pad Names and Configuration (Top View)



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

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

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