ADVANCE PRODUCT SUMMARY

SKY77418: LIPA® Module for CDMA / PCS (1850–1910 MHz)

Applications

- Personal Communications Services (PCS)
- Wireless local loop (WLL)

Features

- Low voltage positive bias
  - 3.2 V to 4.2 V
- Low V_{REF}
  - 2.85 V, nominal
- Supports low collector voltage operation
- Good linearity
- High efficiency at all power levels
  - 20% at 16 dBm
- Large dynamic range
- 16-pad package
  - 4 x 4 x 1.5 mm
- Power down control
- InGaP
- Digital V_{ENABLE}

NEW Skyworks offers lead (Pb)-free "environmentally friendly" packaging that is RoHS compliant (European Parliament for the Restriction of Hazardous Substances).

Description

The SKY77418 Load Insensitive Power Amplifier (LIPA™) module is a fully matched 16-pad surface mount module developed for Code Division Multiple Access (CDMA) applications. This small and efficient power amplifier packs full coverage of the 1850–1910 MHz bandwidth into a single compact package.

Because of high efficiencies attained throughout the entire power range, the SKY77418 delivers unsurpassed talk-time advantages. In addition, Skywork's patented LIPA technology ensures that the stringent linearity requirements are met, even with a load mismatch of 4:1.

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. The output match is realized off-chip within the module package to optimize efficiency and power performance into a 50 Ω load. This device is manufactured with Skyworks' InGaP GaAs Heterojunction Bipolar Transistor (HBT) process that provides for all positive voltage DC supply operation while maintaining high efficiency and good linearity. Primary bias to the SKY77418 is supplied directly from a three-cell Ni-Cd, a single-cell Li-Ion, or other suitable battery with an output in the 3.2 to 4.2 volt range. Power down is accomplished by setting the voltage on the low current reference pad 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.

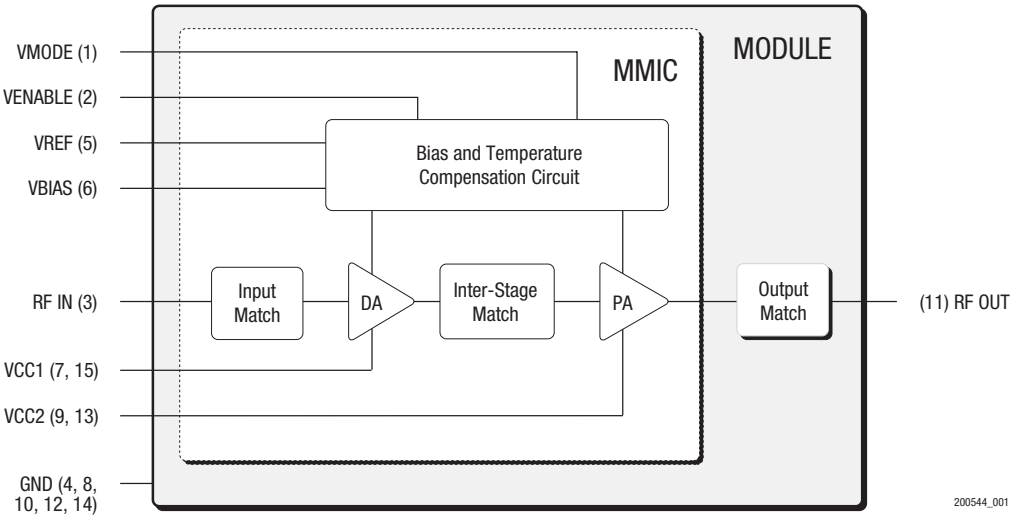


Figure 1. Functional Block Diagram

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