

## PRODUCT SUMMARY

# SKY77148: PA Module for CDMA2000 (450–460 MHz)

## APPLICATIONS

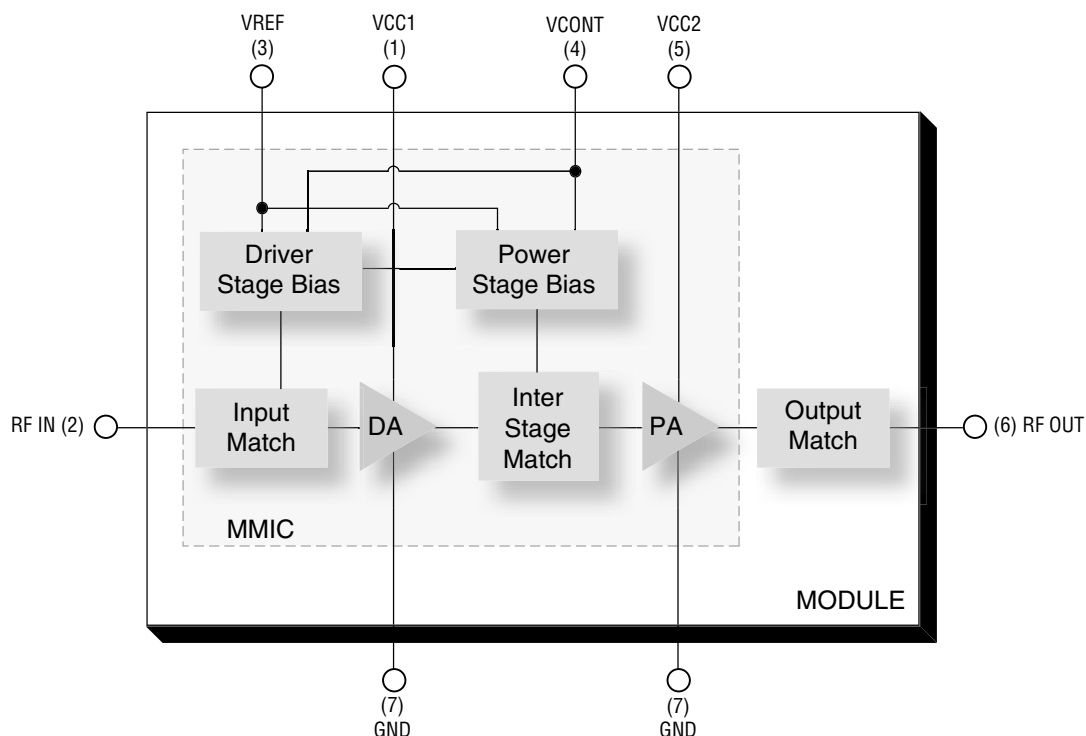
- Digital cellular (CDMA2000)
- Wireless Local Loop (WLL)

## FEATURES

- Low voltage positive bias supply (3.2 V to 4.2 V)
- Good linearity
- High efficiency across wide dynamic range
- Dual-mode operation
- 7-pin package  
6 mm x 6 mm x 1.5 mm
- Power down control
- Low power state control
- CDMA2000

The SKY77148 Power Amplifier Module (PAM) is a fully matched 7-pin surface mount module developed for Code Division Multiple Access (CDMA2000) handset and Wireless Local Loop applications. This small and efficient power amplifier packs full coverage of the 450–460 MHz bandwidth into a single compact package. The device meets the stringent CDMA2000 linearity requirements to and exceeding 29 dBm output power. A low current pin (VCONT) provides improved efficiency for the low RF power range of operation.

The single Gallium Arsenide (GaAs) Microwave Monolithic Integrated Circuit (MMIC) contains all active circuitry within the module, which includes on-board bias circuitry as well as input and interstage matching circuits. Output match into a 50  $\Omega$  load is realized off-chip within the module package to optimize efficiency and power performance. This device is manufactured with Skyworks' 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 SKY77148 is supplied directly from a three-cell nickel cadmium, a single-cell lithium ion, or other suitable battery with a rated output in the 3.2 to 4.2 volt range. Setting the voltage on the low current reference pin to zero volts accomplishes power down. No external supply side switch is needed as typical "off" leakage is a few microamperes with full primary voltage from the battery.



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Figure 1. Functional Block Diagram

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