

**PRODUCT SUMMARY**

# SKY77752 SkyHi™ Dual-Band Power Amplifier Module for CDMA2000 / WCDMA / HSDPA / HSUPA Band II (1850–1910 MHz) Band V (824–849 MHz), LTE

**APPLICATIONS**

- WCDMA handsets
- HSDPA
- HSUPA
- CDMA2000
- EVDO
- LTE

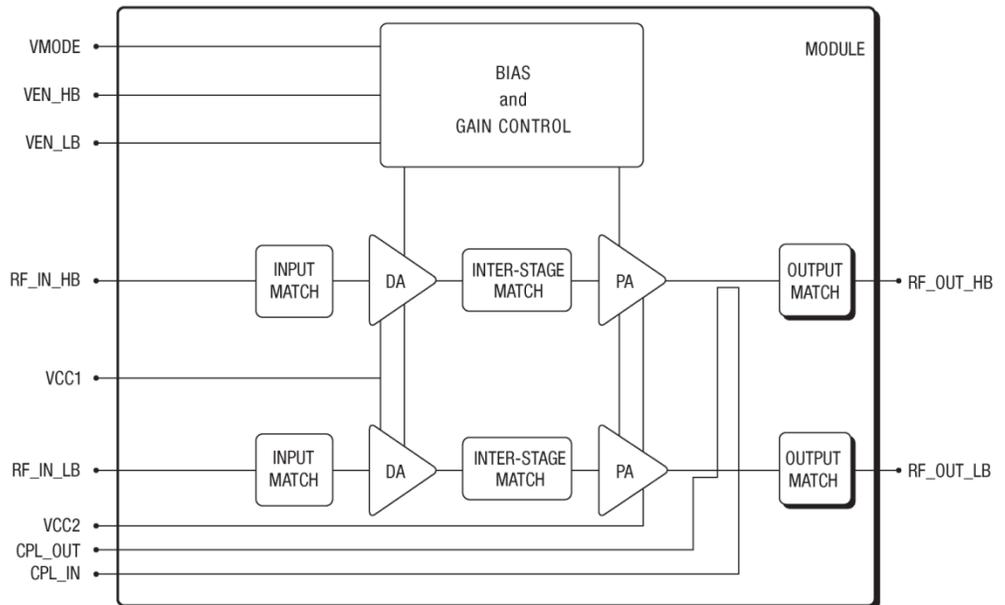
**Features**

- Low voltage positive bias supply: 3.2 V to 4.2 V
- Good linearity
- High efficiency
  - Band II  
47% at 28.3 dBm
  - Band V  
47% at 28.5 dBm
- Large dynamic range
- Small, low profile package
  - 3 mm x 4 mm x 0.9 mm
  - 16-pad configuration
- Power down control
- InGaP
- Supports low collector voltage operation
- Digital Enable
- No V<sub>REF</sub> required
- CMOS compatible control signals
- Integrated Directional Coupler

The SKY77752 SkyHi™ Power Amplifier Module (PAM) is a fully matched, 16-pad, surface mount module developed for Code Division Multiple Access (CDMA) and Wideband Code Division Multiple Access (WCDMA) applications. This small and efficient module packs full WCDMA Band II and Band V coverage into a single compact package. The SKY77752 meets the stringent spectral linearity requirements of WCDMA transmission, with high power added efficiency for power output to 28.8 dBm (Band II) and 28.2 dBm (Band V). The SKY77752 meets the stringent spectral linearity requirements of High Speed Downlink Packet Access (HSDPA) data transmission with high power added efficiency. A directional coupler is integrated into the module thus eliminating 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 SKY77752 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. No VREF voltage is required. Power down is accomplished by setting the voltage on VEN\_HB and VEN\_LB 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. SKY77752 Functional Block Diagram**

 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.

## Ordering Information

| Product Name                                     | Order Number | Evaluation Board Part Number |
|--|--------------|------------------------------|
| SKY77752 SkyHi™ Dual-Band Power Amplifier Module | SKY77752-21  | EN21-D515-001 REV A V1       |

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