

**PRODUCT SUMMARY**

# **SKY77761 SkyHi™ Power Amplifier Module for CDMA / WCDMA / HSDPA / HSUPA / HSPA+ / LTE – Band I (1920–1980 MHz)**

## **Applications**

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

## **Features**

- Low voltage positive bias supply 3.2 V to 4.2 V
- Good linearity
- High efficiency
- 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 SKY77761 Power Amplifier Module (PAM) is a fully matched 10-pad surface mount module developed for Wideband Code Division Multiple Access (WCDMA) applications. This small and efficient module packs full 1920-1980 MHz bandwidth coverage into a single compact package. Because of high efficiencies attained throughout the entire power range, the SKY77761 delivers unsurpassed talk-time advantages. The SKY77761 meets the stringent spectral linearity requirements of High Speed Downlink Packet Access (HSDPA), High Speed Uplink Packet Access (HSUPA), and Long Term Evolution (LTE) data transmission with high power added efficiency. An integrated directional coupler eliminates the need for any external coupler.

The Gallium Arsenide (GaAs) Microwave Monolithic Integrated Circuit (MMIC) contains all amplifier active circuitry, including input and interstage matching circuits. The silicon CMOS support die, providing precision biasing for the MMIC affords a true CMOS-compatible control interface. Output match into a 50-ohm load, realized off-chip within the module package, optimizes efficiency and power performance.

The SKY77761 is manufactured with Skyworks' InGaP GaAs Heterojunction Bipolar Transistor (HBT) process which provides for all positive voltage DC supply operation and maintains high efficiency and good linearity. While primary bias to the SKY77761 can be supplied directly from any suitable battery with an output of 3.2 V to 4.2 V, optimal performance is obtained with VCC2 sourced from a DC-DC power supply adjusted within 0.5 V to 3.4 V based on target output power levels. Power down executes by setting 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.



Skyworks Green™ products are compliant with all applicable legislation and are halogen-free. For additional information, refer to Skyworks Definition of Green™, document number S004-0074.

## Ordering Information

Order Number	Manufacturing Part Number	Evaluation Board Part Number
SKY77761	SKY77761-11 SKY77761-12	EN20-D957-001 REV A

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