



SKYWORKS®

PRODUCT SUMMARY

SKY77762-81: SkyHi™ Power Amplifier Module for CDMA, WCDMA, HSDPA, HSUPA, HSPA+, LTE Band II (1850 to 1920 MHz) Applications

Applications

- WCDMA handsets
- High speed downlink packet access (HSDPA)
- High speed uplink packet access (HSUPA and HSPA+)
- Long term evolution (LTE)
 - Band 25 (1850 MHz to 1915 MHz)
 - Band 39 (1850 MHz to 1920 MHz)
- CDMA2000, evolution-data optimized (EVDO)

Features

- Low voltage positive bias supply, 3.0 V to 4.5 V
- Good linearity
- High efficiency
 - 46% at 28.6 dBm
- Large dynamic range
- Power down control
- Supports low collector voltage operation
- Digital enable
- No V_{REF} required
- CMOS compatible control signals
- Integrated directional coupler
- Small, 10-pad, low profile package, 3 mm x 3 mm x 0.9 mm
- MSL3, 260 °C per JEDEC-J-STD-020
- For RoHS and other product compliance information, see the [Skyworks Certificate of Conformance](#).

Description

The SKY77762-81 SkyHi™ fully matched power amplifier module (PAM) is developed for wideband code division multiple access (WCDMA) applications.

This small and efficient module packs full 1850 to 1920 MHz bandwidth coverage into a single compact package.

High efficiencies attained throughout the entire power range enable talk-time advantages. The SKY77762-81 meets the stringent spectral linearity requirements of HSDPA, HSUPA, and LTE data transmission with high power-added efficiency.

An integrated directional coupler reduces system part count.

The gallium arsenide (GaAs) microwave monolithic integrated circuit (MMIC) contains all amplifier active circuitry, including input and interstage matching circuits. Output matching into a 50 Ω load optimizes efficiency and power performance.

The silicon CMOS support die, providing precision biasing for the MMIC, enables a true CMOS-compatible control interface.

While primary bias to the SKY77762-81 can be supplied directly from any suitable battery with an output of 3.2 V to 4.2 V, optimal performance is obtained with V_{CC2} sourced from a dc-dc power supply adjusted within 0.5 V to 3.6 V based on target output power levels.

Power down executes by setting V_{ENABLE} to zero volts. No external supply-side switch is needed since typical “off” leakage is a few micro amperes with full primary voltage supplied from the battery.

Ordering Information

Part Number	Description	Evaluation Board Part Number
SKY77762-81	SkyHi™ Power Amplifier Module for CDMA, WCDMA, HSDPA, HSUPA, HSPA+, LTE Band II Applications	EN20-D957-001

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