

## PRODUCT SUMMARY

# SKY77814-11 Power Amplifier Module for FDD LTE (Bands 7, 30), TDD LTE (Bands 38/41, 40 and AXGP Band)

## Applications

- Long-Term Evolution (LTE)
- Evolved Universal Terrestrial Radio Access Networks (EUTRAN)
- Handsets and Data Cards

## Features

- Optimized for Average Power Tracking (APT)
- High efficiency Broadband  
2.3 GHz to 2.69 GHz
- Supports modulation bandwidth up to 40 MHz
- Small, low profile package
  - 4.0 x 3.0 x 0.85 mm
  - 24-pad configuration
- MIPI® RFFE interface
- Integrated output switch including TDD Tx/Rx function for single SAW architecture
- RF I/O internally matched to 50 ohms
- For RoHS and other product compliance information, see the Skyworks Certificate of Conformance.

## Description

The SKY77814-11 Power Amplifier Module (PAM) is a fully matched, 24-pad surface mount (SMT) module developed for LTE applications. The module includes broadband coverage of FDD LTE

Bands 7 and 30, TDD LTE Bands 38/40, and Band 41 all in a compact 4.0 x 3.0 x 0.85 mm package. Attaining high efficiencies throughout the entire power range and meeting

the stringent linearity requirements of LTE, the SKY77814-11 delivers unsurpassed savings in current consumption for data-intensive applications.

The Gallium Arsenide (GaAs) Microwave Monolithic Integrated Circuit (MMIC) contains all amplifier active circuitry, including input, interstage, and output matching circuits. Output match into a 50-ohm load, realized off-chip within the module package, optimizes efficiency and power performance. A silicon-on-insulator (SOI) switch following the wideband power amplifier directs the RF output signal to either a band 7 duplexer or to one of three TDD filters supporting bands 38, 40, and 41. Additional throws in the SOI switch allow the reuse of TDD filters in Rx mode by providing paths to either the band 40 Rx port or a shared band 38/41 Rx port. Biasing for the PA MMIC and switch is generated on a CMOS IC controlled through a MIPI RFFE interface.

The SKY77814-11 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. Optimal performance is obtained with VCC1 and VCC2 sourced from a DC-DC power supply based on target output power. No external supply side switch is required as typical "off" leakage is a few microamperes.

4G Modulation scheme includes:

- FDD LTE
- TDD LTE

Uplink Carrier Aggregation (CA) support for Bands 40/41 (up to 40 MHz)

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### Ordering Information

| Product Name                       | Order Number | Evaluation Board Part Number |
|------------------------------------|--------------|------------------------------|
| SKY77814-11 Power Amplifier Module | SKY77814-11  | EN40-D896-001                |



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