

## PRODUCT SUMMARY

# SKY77822-21 Power Amplifier Module for FDD LTE Bands 7 and 30, TDD LTE Bands 38/41 and 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
- MIPI® RFFE interface
- Integrated output switch including TDD Tx/Rx function for single SAW architecture
- RF I/O internally matched to 50 ohms
- Small, low profile package
  - 4.0 x 3.65 x 0.8 mm Max.
  - 28-pad configuration



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## Description

The SKY77822-21 Power Amplifier Module (PAM) is a fully matched, 28-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 in a compact 4.0 x 3.65 mm package. Attaining high efficiencies throughout the entire power range while meeting the stringent LTE linearity requirements, the SKY77822-21 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 is realized off-chip within the module package to optimize efficiency and power performance. Silicon-on-insulator (SOI) switch follows the wideband power amplifier to direct the RF output signal to the appropriate TDD or FDD filters as desired for the application. Additional throws in the SOI switch allow the reuse of TDD filters in Rx mode by providing paths to either the HB2 Rx port (HBRX1) or a shared HB1/HB2 Rx port (HBRX2). Bias for the PA MMIC and switch is generated on a CMOS IC controlled through a MIPI RFFE interface.

The SKY77822-21 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.

## Ordering Information

Product Name	Order Number	Evaluation Board Part Number
SKY77822-21 Power Amplifier Module	SKY77822-21	EN40-D926-001

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