

PRODUCT SUMMARY

SKY77641 Multimode Multiband Power Amplifier Module

Applications

- Multiband 3G / LTE handsets
- WCDMA Bands I, II, III, IV, V, VIII, IX
- TD-SCDMA Bands 34, 39
- FDD LTE Bands 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 17, 20, 28, 30
- TDD LTE Bands 38, 39, 40, 41

Features

- Nine outputs
- Industry-leading PAE for 3G/4G
- Optimized for APT DCDC operation
- Fully programmable Mobile Industry Processor Interface (MIPI) control
- Dual Low Band RF inputs support separate transceiver outputs or interstage filtering
- MIPI programmable bias modes optimize best efficiency / linearity trade-off for 3G and 4G; minimizes DG09 for 3G.
- Small, low profile package:
 - 4.0 x 6.8 x 0.8 mm Max.
 - 42-pad configuration

Description

Skyworks SKY77641 is a multimode multiband (MMMB) Power Amplifier Module (PAM) that supports 3G / 4G handsets and operates efficiently in WCDMA, TD-SCDMA, and LTE modes. The module is fully programmable through a Mobile Industry Processor Interface (MIPI®).

The PAM consists of a WCDMA / LTE block for low, high, and mid-bands, and a Multi-Function Control (MFC) block, RF input/output ports internally matched to 50 Ω to reduce the number of external components. A CMOS integrated circuit uses standard MIPI controls to provide the internal MFC interface and operation. Extremely low leakage current maximizes handset standby time.

The InGaP die and the silicon die and passive components are mounted on a multi-layer laminate substrate. The assembly is encapsulated in a 4.0 mm x 6.8 mm x 0.8 mm, 42-pad MCM, SMT package which allows for a highly manufacturable, low cost solution.

3G: The SKY77641 supports WCDMA, High-Speed Downlink Packet Access (HSDPA), High Speed Uplink Packet Access (HSUPA), High Speed Packet Access (HSPA+), and TD-SCDMA modulations. Varying the input power level provides output power control. V_{CC} is adjusted using a DCDC converter to maximize efficiency for each power level and modulation type.

4G: The SKY77641 supports 1.4, 3, 5, 10, 15, 20 MHz channel bandwidths. Similar to 3G operation, output power is controlled by varying the input power and V_{CC} is adjusted using a DCDC converter to maximize efficiency for each power level.

3G / 4G Modulation scheme includes:

- WCDMA Voice Release 99
- HSDPA categories
- HSUPA
- HSPA+
- TD-SCDMA
- LTE 1.4, 3, 5, 10, 15, 20 MHz Channel BW
- TDD-LTE



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
SKY77641 Multimode Multiband Power Amplifier Module	SKY77641	EN40-D926-00

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