

**PRODUCT SUMMARY**

# SKY77651-41: NR Power Amplifier Module for ENDC Applications

## Applications

- Multiband 4G/5G handsets
- LTE carrier aggregation
- LTE bands: 5, 8, 12, 13, 14, 20, 26, 28, 71
- NR bands: n5, n8, n12, n20, n28, n71

## Features

- Paired with SKY77652 (Mid-band/High Band)
- Seven outputs
- Industry-leading PAE for 4G/5G
- Optimized for APT DCDC operation
- Fully programmable Mobile Industry Processor Interface (MIPI) control
- Three Low Band RF inputs support separate transceiver outputs or interstage filtering
- MIPI programmable bias modes optimize efficiency/linearity trade-off for 4G and 5G
- Small, low profile package:
  - 4.0 mm x 2.8 mm x 0.75 mm
  - 24-pad configuration

## Description

The Skyworks SKY77651-41 Power Amplifier Module (PAM) supports 5G handsets for ENDC operation. The module is fully programmable through a Mobile Industry Processor Interface (MIPI<sup>®</sup>).

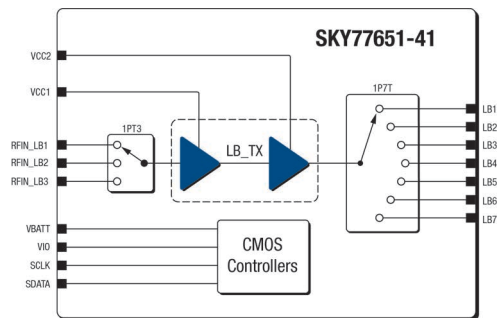
The PAM consists of a 4G/5G blocks for low band, a Multi-Function Control (MFC) block and RF input/output ports internally matched to 50 Ω to reduce the number of external components. A CMOS integrated circuit uses standard MIPI controls to provide the internal MFC interface and operation. Extremely 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 2.8 mm x

4.0 mm x 0.75 mm, 24-pad MCM, SMT package which allows for a highly manufacturable, low cost solution.

**4G:** The SKY77651-41 supports 1.4, 3, 5, 10, 15, 20 MHz channel bandwidths. Output power is controlled by varying the input power and VCC is adjusted using a DCDC converter to maximize efficiency for each power level.

**5G:** The SKY77651-41 meets spectral linearity requirements of NR modulation with DFT and CP OFDM modulations with up to 256 QAM constellations. The PAM supports various resource block allocations within 3GPP defined transmission bandwidth with good power-added efficiency.



**Figure 1. SKY77651-41 Block Diagram**



Skyworks Green<sup>™</sup> products are compliant with all applicable legislation and are halogen-free. For additional information, refer to *Skyworks Definition of Green<sup>™</sup>*, document number SQ04-0074.

Ordering Information

Part Number	Part Description	Evaluation Board Part Number
SKY77651-41	NR Power Amplifier Module for ENDC Applications	SKY77651-41-EVB

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