PRODUCT SUMMARY

SKY77652-11 SkyLiTE™ Multimode Multiband Power Amplifier Module

Applications

- Multiband 3G / LTE handsets
- LTE Carrier Aggregation
- WCDMA Bands I, II, III, IV, IX
- CDMA Bands BC1, BC4, BC6, BC15
- TD-SCDMA Bands 34, 39
- FDD LTE Bands 1, 2, 3, 4, 7, 9, 25, 30
- TDD LTE Band 38, 39, 40, 41

Features

- Paired with SKY77651 (Low Band)
- Five output ports and One Rx port for Mid-band
- Four output ports and Two Rx ports for High Band
- Industry-leading PAE for 3G/4G
- Optimized for APT DCDC operation
- Fully programmable Mobile Industry Processor Interface (MIPI®) control
- MIPI® programmable bias modes optimize best efficiency / linearity trade-off for 3G and 4G; minimizes DG09 for 3G.
- Small, low profile package:
  - 3.65 x 4.0 x 0.75 mm
  - 28-pad configuration

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.

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Description

Skyworks SKY77652-11 SkyLiTE™ is a multimode multiband (MMMB) Power Amplifier Module (PAM) that supports 3G / 4G handsets and operates efficiently in CDMA, 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 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 3.65 x 4.0 x 0.75 mm, 28-pad MCM, SMT package which allows for a highly manufacturable, low cost solution.

3G: The SKY77652-11 supports modulations in CDMA, WCDMA, High-Speed Downlink Packet Access (HSDPA), High Speed Uplink Packet Access (HSUPA), High Speed Packet Access (HSPA+), and TD-SCDMA. Varying the input power level controls the output power. A DCDC converter adjusts V_{CC} to maximize efficiency for each power level and modulation type.

4G: The SKY77652-11 supports 1.4, 3, 5, 10, 15, 20 MHz channel bandwidths. Similar to 3G operation, varying the input power level controls the output power and a DCDC converter adjusts V_{CC} to maximize efficiency for each power level.

3G / 4G Modulation scheme includes:

- WCDMA Voice Release 99
- HSDPA categories
- HSUPA
- HSPA+
- TD-SCDMA
- CDMA2000 1x RC1, 1x RC2
- CDMA2000 EVDO
- LTE 1.4, 3, 5, 10, 15, 20 MHz Channel BW
- TDD LTE
- TDD LTE intra-band uplink Carrier Aggregation (CA) Band 39 (35 MHz), Band 40/41 (40 MHz)

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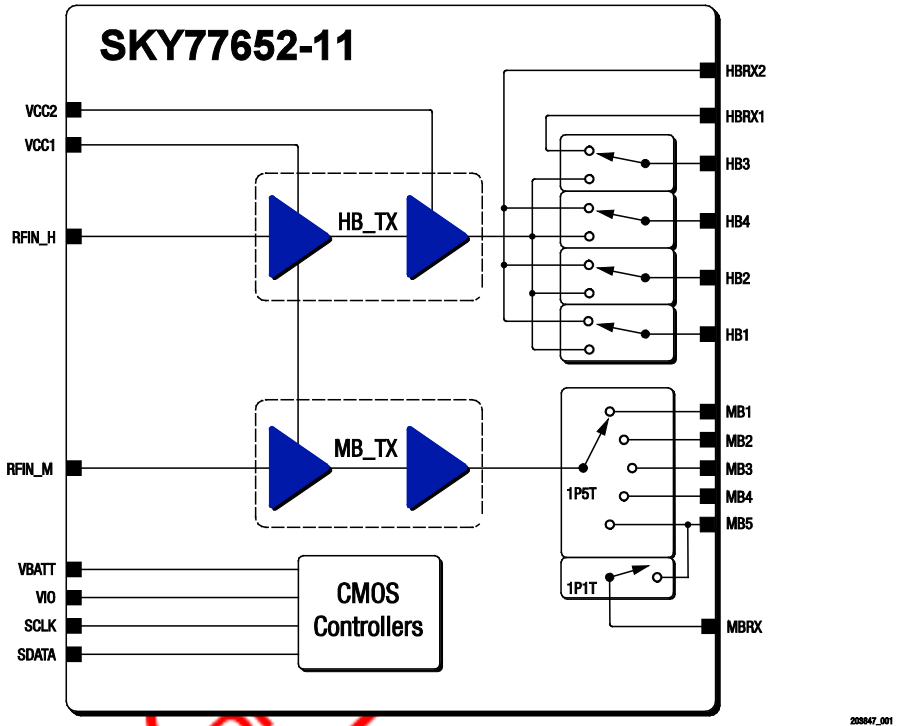

Figure 1. SKY77652-11 Functional Block Diagram

Ordering Information

Product Name	Order Number	Evaluation Board Part Number
SKY77652-11 SkyLiTE™ Multimode Multiband Power Amplifier Module	SKY77652-11	EN40-D926-00

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