PRODUCT SUMMARY

SKY77643-11 SkyLiTE™ 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 Band 38, 39, 40, 41

Features

- Hybrid PA architecture
- Two T/R (RX) ports
- 14 RF outputs
- 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:
  - 4.0 mm x 6.8 mm x 0.8 mm, Max.
  - 42-pad configuration
- For RoHS and other product compliance information, see the Skyworks Certificate of Conformance

Description

SkyLiTE™ is Skyworks' newest family of LTE devices which consists of highly integrated modules incorporating the amplification, switching, WiFi filtering and coupler functions required to support all major FDD/TDD bands. With the addition of external duplexers, this product family provides OEMs with a scalable and reconfigurable front-end system suitable for markets worldwide.

SKY77643-11 SkyLiTE™ is a key building block for global or five-mode front-end implementation. As a hybrid multimode multiband (MMMB) Power Amplifier Module (PAM), the SKY77643-11 SkyLiTE™ 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 module includes a WCDMA / LTE block for low, high, and mid-bands, a Multi-Function Control (MFC) block, and the RF input/output ports are internally matched to 50 Ω loads to minimize external components. A CMOS integrated circuit utilizes standard MIPI® controls for the internal MFC interface and operation. Extremely low leakage current maximizes handset standby time.

The InGaP die, 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 SKY77643-11 SkyLiTE™ 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 control of output power. Adjusting the V_{CC} using a DCDC converter maximizes efficiency of each power level and modulation type.

4G: The SKY77643-11 SkyLiTE™ supports 1.4, 3, 5, 10, 15, 20 MHz channel bandwidths. Similar to 3G operation, varying the input power level provides control of output power. Adjusting the V_{CC} using a DCDC converter maximizes efficiency at 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

Ordering Information

Product Name	Order Number	Evaluation Board Part Number
SKY77643-11 SkyLiTE™ Multimode Multiband Power Amplifier Module	SKY77643-11	TBD