

PRODUCT SUMMARY

SKY77657-11 Multimode Multiband Power Amplifier Module

Applications

- Multiband 3G / LTE handsets
- LTE Carrier Aggregation
- WCDMA Bands: V and VIII
- CDMA Bands: BC0 and BC10
- FDD LTE Bands:
5, 8, 12, 13, 14, 17, 20, 26, 27, 28

Features

- Paired with Skyworks' SKY77658 (Mid-band / High Band)
- Seven outputs
- Industry-leading PAE for 3G / 4G
- 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 3G / 4G, minimize DG09 for 3G.
- Small, low profile package:
 - 2.8 mm x 4.0 mm x 0.75 mm
 - 24-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.

Description

Skyworks SKY77657-11 is a multimode multiband (MMMB) Power Amplifier Module (PAM) that supports 3G / 4G handsets and operates efficiently in CDMA, WCDMA, 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 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.

3G: The SKY77657-11 supports CDMA, WCDMA, High-Speed Downlink Packet Access (HSDPA), High Speed Uplink Packet Access (HSUPA), and High Speed Packet Access (HSPA+) 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 SKY77657-11 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+
- CDMA2000 1x RC1, 1x RC3
- CDMA2000 EVDO
- LTE 1.4, 3, 5, 10, 15, 20 MHz Channel BW

Ordering Information

Product Name	Order Number	Evaluation Board Part Number
SKY77657-11 Multimode Multiband Power Amplifier Module	SKY77657-11	

Copyright © 2016, Skyworks Solutions Inc. All Rights Reserved.

Information in this document is provided in connection with Skyworks Solutions Inc. ("Skyworks") products or services. These materials including the information contained herein are provided by Skyworks as a service to its customers and may be used for informational purposes only by the customer. Skyworks assumes no responsibility for errors or omissions in these materials or the information contained herein. Skyworks may change its documentation products services specifications or product descriptions at any time without notice. Skyworks makes no commitment to update the materials or information and shall have no responsibility whatsoever for conflicts incompatibilities or other difficulties arising from any future changes.

No license whether express implied by estoppel or otherwise is granted to any intellectual property rights by this document. Skyworks assumes no liability for any materials products or information provided hereunder including the sale distribution reproduction or use of Skyworks products information or materials except as may be provided in Skyworks Terms and Conditions of Sale.

THE MATERIALS PRODUCTS AND INFORMATION ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND WHETHER EXPRESS IMPLIED STATUTORY OR OTHERWISE INCLUDING FITNESS FOR A PARTICULAR PURPOSE OR USE MERCHANTABILITY PERFORMANCE QUALITY OR NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT, ALL SUCH WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED. SKYWORKS DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION TEXT GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. SKYWORKS SHALL NOT BE LIABLE FOR ANY DAMAGES INCLUDING BUT NOT LIMITED TO ANY SPECIAL INDIRECT INCIDENTAL STATUTORY OR CONSEQUENTIAL DAMAGES INCLUDING WITHOUT LIMITATION LOST REVENUES OR LOST PROFITS THAT MAY RESULT FROM THE USE OF THE MATERIALS OR INFORMATION WHETHER OR NOT THE RECIPIENT OF MATERIALS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Skyworks products are not intended for use in medical lifesaving or life-sustaining applications or other equipment in which the failure of the Skyworks products could lead to personal injury death physical or environmental damage. Skyworks customers using or selling Skyworks products for use in such applications do so at their own risk and agree to fully indemnify Skyworks for any damages resulting from such improper use or sale.

Customers are responsible for their products and applications using Skyworks products which may deviate from published specifications as a result of design defects errors or operation of products outside of published parameters or design specifications. Customers should include design and operating safeguards to minimize these and other risks. Skyworks assumes no liability for applications assistance customer product design or damage to any equipment resulting from the use of Skyworks products outside of stated published specifications or parameters.

Skyworks and the Skyworks symbol are trademarks or registered trademarks of Skyworks Solutions Inc. in the United States and other countries. Third-party brands and names are for identification purposes only and are the property of their respective owners. Additional information including relevant terms and conditions posted at www.skyworksinc.com are incorporated by reference.