

PRODUCT SUMMARY

SKY66189-11: 1930 to 1995 MHz Linear Power Amplifier

Applications

- 3G/4G LTE Band 2 and 25 small cell
- Active distributed antenna system
- Cellular repeaters
- Driver amplifier

Features

- High gain: 40 dB (unconditionally stable)
- High linearity: +23 dBm with -50 dBc ACLR @ 85°C (WCDMA Test Model 1 with 64 DPCH)
- RF input and output internally matched to 50 Ω
- Excellent output return loss: <-20 dB
- Integrated active bias: performance compensated over temp
- PA On/Off function: 3.5 μs switching time
- Integrated coupler for output power monitoring
- Single supply voltage: 3.3 V
- Pin-to-pin compatible PA family supporting all 3GPP bands
- Small 5 x 5 mm, 28-pin package (MSL3, 260 °C per JEDEC J-STD-020)



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.

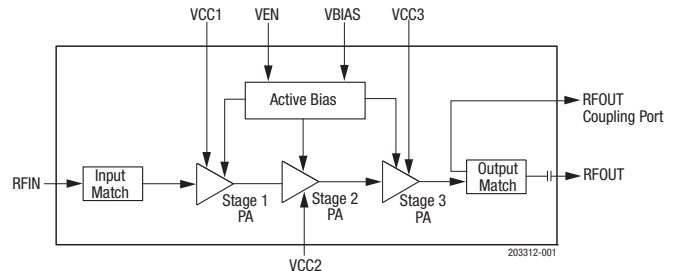


Figure 1. SKY66189-11 Linear PA Block Diagram

Description

The SKY66189-11 is a high-linearity power amplifier (PA) with fully matched input/output and high gain. The compact 5 x 5 mm PA is designed for FDD 3G/4G LTE small cell base stations operating from 1930 to 1995 MHz. The active biasing circuitry is integrated to compensate PA performance over temperature, voltage, and process variation as well as an internal coupler for power monitoring.

The SKY66189-11 requires minimal external components and is part of a high-linearity, pin-to-pin compatible PA family supporting all 3GPP bands.

A block diagram of the SKY66189-11 is shown in Figure 1. The device package and pinout for the 28-pin device are shown in Figure 2. Table 1 lists the pin-to-pin compatible parts in the PA family. Signal pin assignments and functional pin descriptions are described in Table 2.

Table 1. Pin-to-Pin Compatible PA Family

Part Number	Frequency (MHz)	LTE Band
SKY66181-11	1805 to 1880	3
SKY66184-11	2110 to 2170	1, 4, and 10
SKY66185-11	851 to 894	5, 6, 18, 19, 26, and 27
SKY66186-11	728 to 768	12, 13, 14, and 17
SKY66187-11	2620 to 2690	7
SKY66188-11	758 to 803	28
SKY66189-11	1930 to 1995	2 and 25

Ordering Information

Model Name	Manufacturing Part Number	Evaluation Board Part Number
SKY66189-11: Linear PA	SKY66189-11	SKY66189-11-EK1

Copyright © 2015-2017 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.