

## PRODUCT SUMMARY

# SKY65623-682LF: GPS/GLONASS/Galileo/BDS Low-Noise Amplifier

## Applications

- GPS/GLONASS/Galileo/BDS radio receivers
- Compass (Beidou)
- Smartphones
- Tablet/laptop PCs
- Personal navigation devices

## Features

- Small signal gain: 17 dB typical
- Low noise figure: 0.85 dB typical
- Out-of-band IIP3: -10 dBm typical
- Low current consumption: 1.1 mA typical
- Output impedance internally matched to 50  $\Omega$
- Single DC supply: 1.5 to 3.0 V
- Minimal number of external components required
- Small, QFN (5-pin, 0.8 × 0.8 mm) package (MSL1, 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.

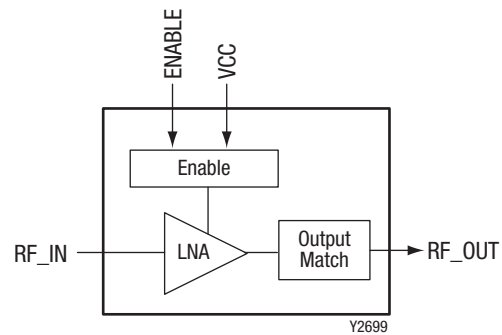


Figure 1. SKY65623-682LF Block Diagram

## Description

The SKY65623-682LF is a Microwave Monolithic Integrated Circuit (MMIC) front-end low-noise amplifier (LNA) designed for Global Positioning System/Global Navigation Satellite System (GPS/GLONASS)/Galileo and Beidou Navigation Satellite System (BDS) receiver applications. The device provides high linearity, excellent gain, a high 1 dB input compression point (IP1dB), and a superior noise figure (NF). Output matching components are embedded inside the device. Minimal input matching components are required.

The SKY65623-682LF is optimized to operate at 1559 to 1606 MHz, which makes it ideal for GPS/GLONASS/Galileo/BDS radio receiver applications.

The SKY65623-682LF is fabricated using advanced SiGe BiCMOS technology. The LNA uses surface-mount technology (SMT) in the form of a 0.8 × 0.8 mm Quad Flat No-Lead (QFN) package, which allows for a highly manufacturable and low-cost solution.

A functional block diagram is shown in Figure 1.

## Ordering Information

Model Name	Manufacturing Part Number	Evaluation Board Part Number
SKY65623-682LF: GPS/GLONASS/Galileo/BDS Low-Noise Amplifier	SKY65623-682LF	SKY6562x-EVB

Copyright © 2015 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](http://www.skyworksinc.com), are incorporated by reference.