

PRODUCT SUMMARY

SKYA23014 SkyOne® Ultra 3.0 Front-End Module for Automotive Applications – WCDMA / LTE Bands 8, 12, 13, 20, 26, 27, 28, 29

Applications

- Multiband 3G/4G telematics boxes
- CDMA / WCDMA / HSPA / HSPA+ / FDD LTE-modulated telematics box for bands 8, 12, 13, 20, 26, 27, 28A, 28B, 29, BC0 and BC10

Features

- Fully integrated LB multiband module
- Optimized for average power tracking system
- CDMA compatible
- Integrated filters for bands 8, 12, 13, 20, 26, 27, 28A, 28B, 29, BC0 & BC10
- Integrated harmonic filter
- MIPI2.0/RFFE interface
- Closed loop architecture with the Implemented coupler output port
- Integrated LNA module
- Flexible TX input
- Support VLB/LB Transmit Output port
- Small, low profile package
 - 6.5 mm x 6.2 mm x 0.75 mm
 - 54-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

The SKYA23014 SkyOne® Automotive Ultra 3.0 is a multimode multiband (MMMB) Front-End Module (FEM) that supports 3G/4G, and CDMA telematics box and operates efficiently in CDMA, WCDMA, HSPA, and LTE modes. RF I/O ports internally matched to 50 ohms, minimize the need for external components. Extremely low leakage current maximizes telematic box standby time. The InGaP/GaAs die and passive components are mounted on a multi-layer laminate substrate and the assembly encapsulated in plastic overmold.

WCDMA: The SKYA23014 enhanced architecture supports WCDMA/High Speed Downlink Packet Access (HSDPA) and High Speed Uplink Packet Access (HSUPA) modulations, covers multiple bands for 3GPP including bands 5, 8 and operates at different power modes. The module is fully controllable via a MIPI serial interface.

LTE: The SKYA23014 meets spectral linearity requirements of LTE modulation with QPSK/16QAM up to 20 MHz bandwidth, including various resource block allocations, with excellent power-added efficiency.

CDMA: The SKYA23014 meets spectral linearity requirements of CDMA2000 and EVDO Release A modulation with good power-added efficiency.

Receiver Section: The SKYA23014's integrated Duplexers, RX SAWs, LNA and an Antenna switch support simultaneous Downlink Carrier Aggregation for additional Rx data rate provides 3G/4G Rx paths from antenna to input ports of RFIC. Carrier Aggregation (CA) requirements for noise and harmonics are designed-in for best desense performance. Optimized low insertion-loss Rx paths, matching circuits, and well-grounded guard traces (high Tx–Rx isolation) inside module mitigate desense problems and enhance sensitivity performance.

LNA Rx Ports: The SKYA23014 provides two LNA input ports to support additional bands.

TRx and Rx Ports: The SKYA23014 provides three TRx ports.

PA AUX Ports: The SKYA23014 provides two PA AUX output ports.

Ordering Information

Part Number	Part Description	Evaluation Board Part Number
SKYA23014	SkyOne® Ultra 3.0 Front-End Module	SKYA23014EK1

Copyright © 2018, 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. or its subsidiaries 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.