SI GE

AMEL

5.8-GHz Down Converter IC

ATR2809

Summary

Preliminary

Features

- Versatile GHz Frequency Range Down Converter
- Low Power Building Block
- Triple Balanced Mixer with High LO Rejection

Benefits

- Low Current Consumption
- Single Supply
- Wide Supply Voltage Range of 2.7V to 4.6V
- . Easy to Use and Handle
- Fully Integrated 5.8 GHz RF Port Matching
- Integrated Coupling Capacitors at RF- and LO-ports
- Open Collector IF Output Port
- Wide Useful Frequency Ranges
- RF: 2 GHz to 7 GHz
- LO: 1 GHz to 4 GHz
- IF: 0 GHz to 3 GHz

Electrostatic sensitive device.

Observe precautions for handling.

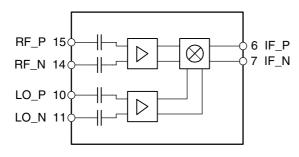


1. Description

The down converter IC ATR2809 is fabricated in Atmel's powerful SiGe bipolar process.

The single ended RF input signal is differentially converted and down (or up) converted by a triple balanced Gilbert-cell mixer.

Figure 1-1. Block Diagram



Rev. 4692ES-DECT-01/06



Note: This is a summary document. A complete document is available under NDA. For more information, please contact your local Atmel sales office.



Ordering Information

Extended Type Number	Package	Remarks
ATR2809-PEPG	QFN16	4×4 mm, exposed pad, taped and reeled, Pb-free

Package Information

Package: QFN 16 - 4x4 Exposed pad 2.1x2.1

(acc. JEDEC OUTLINE No. MO-220)

Dimensions in mm

Drawing-No.: 6.543-5090.01-4

Issue: 2, 24.01.03



Atmel Corporation

2325 Orchard Parkway San Jose, CA 95131, USA Tel: 1(408) 441-0311 Fax: 1(408) 487-2600

Regional Headquarters

Europe

Atmel Sarl Route des Arsenaux 41 Case Postale 80 CH-1705 Fribourg Switzerland

Tel: (41) 26-426-5555 Fax: (41) 26-426-5500

Asia

Room 1219 Chinachem Golden Plaza 77 Mody Road Tsimshatsui East Kowloon Hong Kong

Tel: (852) 2721-9778 Fax: (852) 2722-1369

Japan

9F, Tonetsu Shinkawa Bldg. 1-24-8 Shinkawa Chuo-ku, Tokyo 104-0033 Japan

Tel: (81) 3-3523-3551 Fax: (81) 3-3523-7581

Atmel Operations

Memory

2325 Orchard Parkway San Jose, CA 95131, USA Tel: 1(408) 441-0311 Fax: 1(408) 436-4314

Microcontrollers

2325 Orchard Parkway San Jose, CA 95131, USA Tel: 1(408) 441-0311 Fax: 1(408) 436-4314

La Chantrerie BP 70602 44306 Nantes Cedex 3, France Tel: (33) 2-40-18-18-18

Fax: (33) 2-40-18-19-60

ASIC/ASSP/Smart Cards

Zone Industrielle 13106 Rousset Cedex, France Tel: (33) 4-42-53-60-00 Fax: (33) 4-42-53-60-01

1150 East Cheyenne Mtn. Blvd. Colorado Springs, CO 80906, USA

Tel: 1(719) 576-3300 Fax: 1(719) 540-1759

Fax: (44) 1355-242-743

Scottish Enterprise Technology Park Maxwell Building

East Kilbride G75 0QR, Scotland Tel: (44) 1355-803-000

RF/Automotive

Theresienstrasse 2 Postfach 3535 74025 Heilbronn, Germany Tel: (49) 71-31-67-0 Fax: (49) 71-31-67-2340

1150 East Cheyenne Mtn. Blvd. Colorado Springs, CO 80906, USA

Tel: 1(719) 576-3300 Fax: 1(719) 540-1759

Biometrics/Imaging/Hi-Rel MPU/ High Speed Converters/RF Datacom

Avenue de Rochepleine

BP 123

38521 Saint-Egreve Cedex, France

Tel: (33) 4-76-58-30-00 Fax: (33) 4-76-58-34-80

Literature Requests www.atmel.com/literature

Disclaimer: The information in this document is provided in connection with Atmel products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Atmel products. EXCEPT AS SET FORTH IN ATMEL'S TERMS AND CONDITIONS OF SALE LOCATED ON ATMEL'S WEB SITE, ATMEL ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL ATMEL BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION, OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF ATMEL HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Atmel makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Atmel does not make any commitment to update the information contained herein. Unless specifically provided otherwise, Atmel products are not suitable for, and shall not be used in, automotive applications. Atmel's products are not intended, authorized, or warranted for use as components in applications intended to support or sustain life.

© Atmel Corporation 2006. All rights reserved. Atmel[®], logo and combinations thereof, Everywhere You Are[®] and others, are registered trademarks or trademarks of Atmel Corporation or its subsidiaries. Other terms and product names may be trademarks of others.

