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 2.7 V to 4.6 V**
- **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**

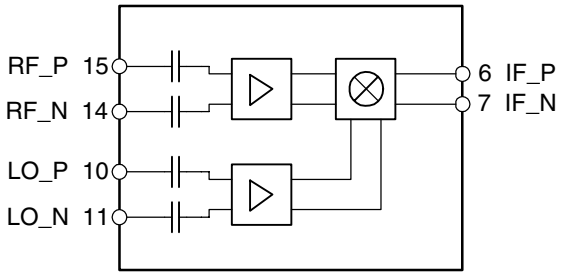
Electrostatic sensitive device.
Observe precautions for handling.

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. Block Diagram



5.8-GHz Down Converter IC

ATR2809

Summary

Preliminary

Rev. 4692CS–DECT–06/04

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

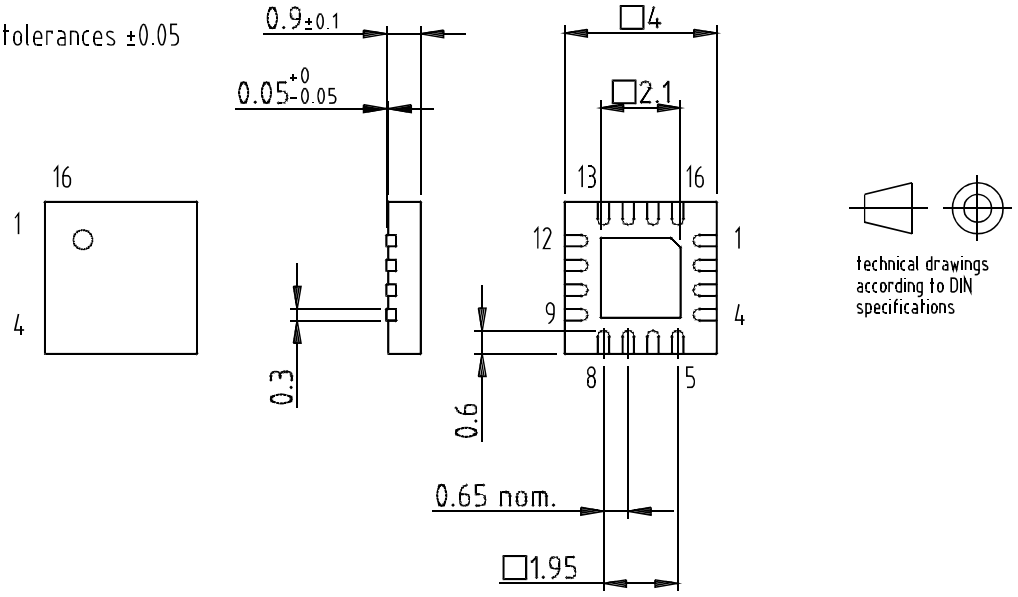
Ordering Information

Extended Type Number	Package	Remarks
ATR2809	QFN16	4 x 4 mm, exposed pad, taped and reeled

Package Information

Package: QFN 16 - 4x4
Exposed pad 2.1x2.1
(acc. JEDEC OUTLINE No. MO-220)
Dimensions in mm

Not indicated tolerances ±0.05



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

Scottish Enterprise Technology Park
Maxwell Building
East Kilbride G75 0QR, Scotland
Tel: (44) 1355-803-000
Fax: (44) 1355-242-743

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

4692CS–DECT–06/04