

## Features

- Frequency Range 5 GHz to 6 GHz
- P<sub>OUT</sub> Maximum 28 dBm
- Gain Typically 19 dB
- V<sub>CC</sub> 3.0 V to 3.9 V
- Package: QFN16
- Current Consumption in Power Down Mode Typically  $\leq 15 \mu\text{A}$

## Benefits

- Biasing Control Extends Battery Life Time
- Simple Input and Output Matching
- One Single Supply Voltage Required

Electrostatic sensitive device.  
Observe precautions for handling.



## Description

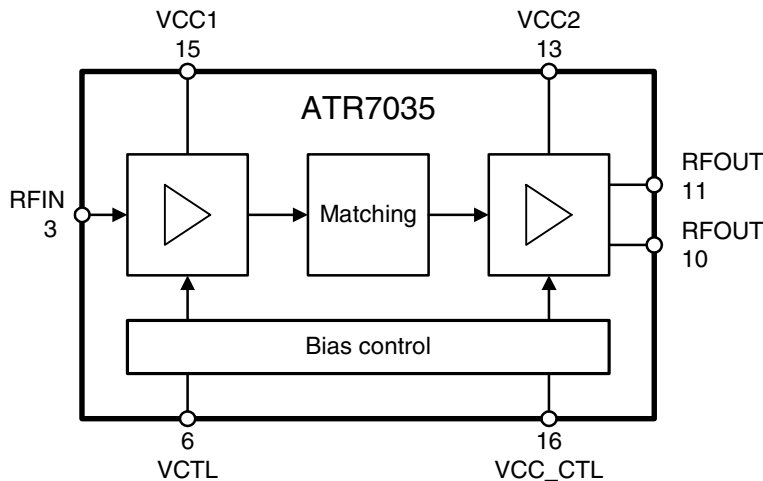
### Process

The 5-GHz power amplifier is designed using Atmel's Silicon-Germanium (SiGe) process and provides excellent noise performance as well as good power-added efficiency.

### Circuitry

The PA consists of a 2-stage amplifier with a maximum output power of 28 dBm. The output stages were realized using an open-collector structure. The IC features 50- $\Omega$  input matching. Power-up/down and output level are controlled at bias control pin 6 (V<sub>CTL</sub>).

Figure 1. Block Diagram



## 5.8-GHz WDCT Power Amplifier

### ATR7035

### Summary

### Preliminary

Rev. 4577DS-DECT-11/04



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

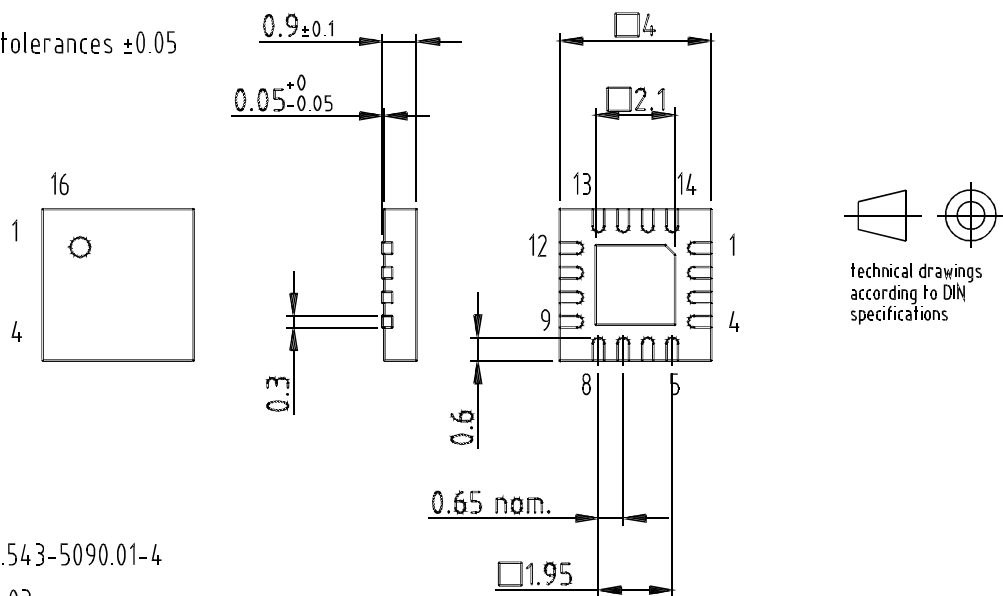
## Ordering Information

Extended Type Number	Package	Remarks
ATR7035-PES	QFN16	Tube, MOQ 750
ATR7035-PEQ	QFN16	Taped and reeled, MOQ 6000

## Package Information

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

Not indicated tolerances  $\pm 0.05$



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](http://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. Atmel's products are not intended, authorized, or warranted for use as components in applications intended to support or sustain life.

© Atmel Corporation 2004. All rights reserved. Atmel®, logo and combinations thereof are registered trademarks, and Everywhere You Are<sup>SM</sup> are the trademarks of Atmel Corporation or its subsidiaries. Other terms and product names may be trademarks of others.



Printed on recycled paper.

4577DS-DECT-11/04