

## Features

- 5.8 GHz Transceiver
- 5 dBm TX Output Power
- -97 dBm Sensitivity
- 1152 kBit/s Data-rate
- Supply-voltage Range 2.9V to 3.6V
- Low IF Receiver
- Low Current Consumption
- Few Low Cost External Components
- No Mechanical Adjustment Required
- Small 32 pin 5 mm × 5 mm QFN Package

## Applications

- 5.8 GHz Digital Cordless Phones
- Game Controllers
- Wireless Head Set
- FCC Part 15 Compliant Radio Link

## 1. Description

The ATR2820 is a single-chip RF-transceiver for applications in the 5.8 GHz ISM band. The QFN32 packaged IC is a complete transceiver including image rejection mixer, low-IF filter, FM demodulator, RSSI, TX preamplifier, integrated PLL with fully integrated VCO. No mechanical adjustment is necessary in production.



## Low IF WDCT 5.8 GHz Transceiver

## ATR2820

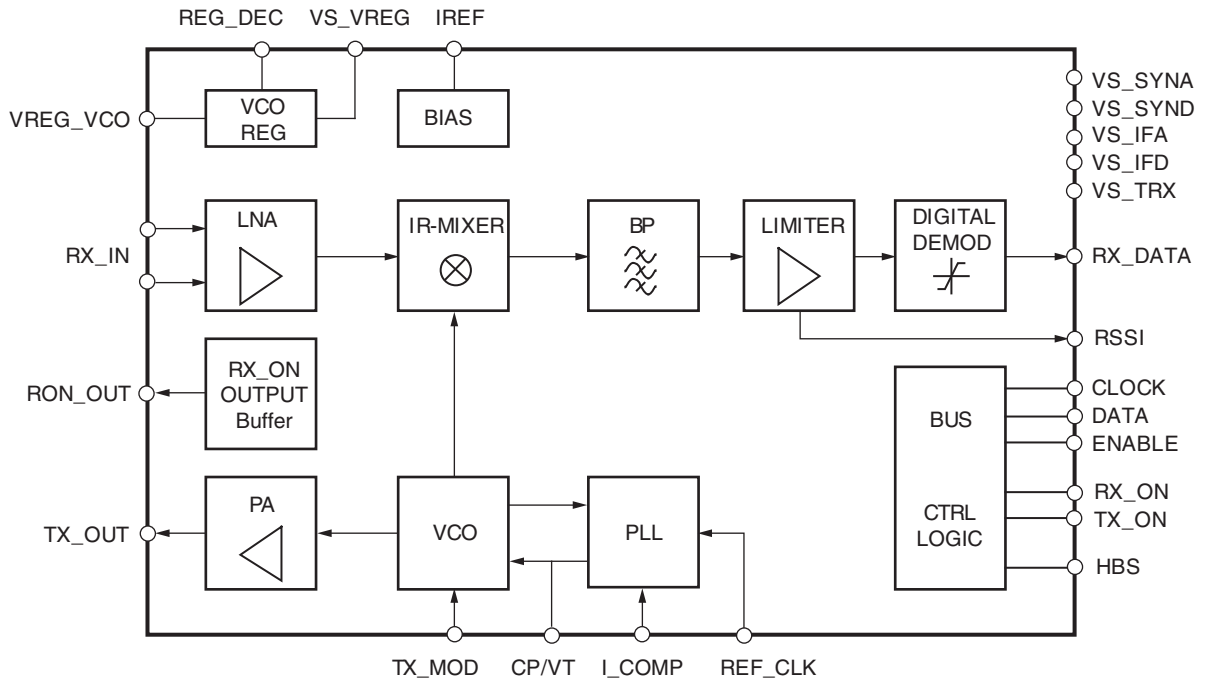
## Summary

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

4704BS-DECT-12/08



**Figure 1-1. Block Diagram**



## 2. Ordering Information

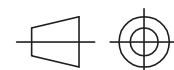
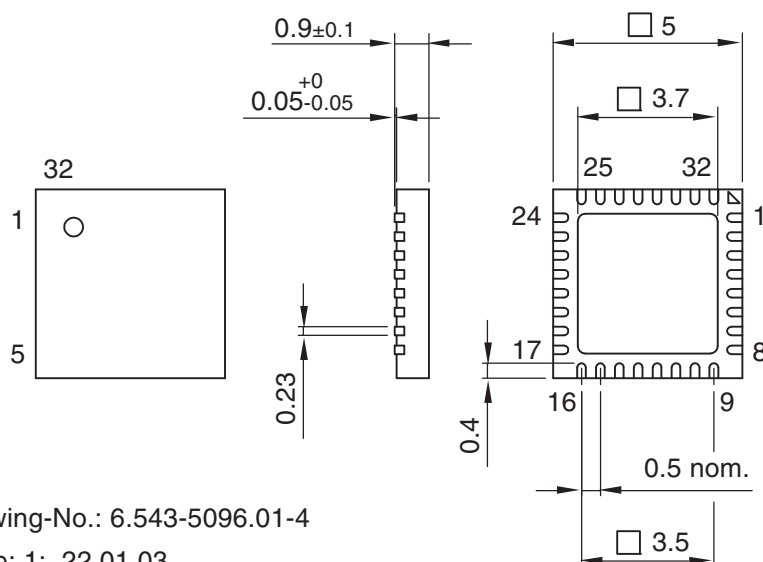
Extended Type Number	Package	Remarks
ATR2820-PNQG	QFN32, 5 mm × 5 mm	Taped and reeled

## 3. Package Information

Package: QFN 32 - 5 x 5  
Exposed pad 3.7 x 3.7

Dimensions in mm

Not indicated tolerances ± 0.05



technical drawings  
according to DIN  
specifications

Drawing-No.: 6.543-5096.01-4

Issue: 1; 22.01.03

## 4. Revision History

Please note that the following page numbers referred to in this section refer to the specific revision mentioned, not to this document.

Revision No.	History
4704BS-DECT-12/08	<ul style="list-style-type: none"> <li>Section 3 "Package Information" on page 3 changed</li> </ul>



## Headquarters

---

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

## International

---

**Atmel Asia**  
Unit 1-5 & 16, 19/F  
BEA Tower, Millennium City 5  
418 Kwun Tong Road  
Kwun Tong, Kowloon  
Hong Kong  
Tel: (852) 2245-6100  
Fax: (852) 2722-1369

**Atmel Europe**  
Le Krebs  
8, Rue Jean-Pierre Timbaud  
BP 309  
78054  
Saint-Quentin-en-Yvelines Cedex  
France  
Tel: (33) 1-30-60-70-00  
Fax: (33) 1-30-60-71-11

**Atmel 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

## Product Contact

---

**Web Site**  
[www.atmel.com](http://www.atmel.com)

**Technical Support**  
[cordless\\_phone@atmel.com](mailto:cordless_phone@atmel.com)

**Sales Contact**  
[www.atmel.com/contacts](http://www.atmel.com/contacts)

**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. 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.

© 2008 Atmel Corporation. All rights reserved. Atmel®, Atmel logo and combinations thereof, and others are registered trademarks or trademarks of Atmel Corporation or its subsidiaries. Other terms and product names may be trademarks of others.