

## OMNITUNE™ TUA 9001

RF Silicon Tuner for for DVB-H/T and CMMB  
(Direct Conversion Receiver)



OMNITUNE™ TUA 9001 is a highly integrated CMOS Direct Conversion Receiver (DCR), supports DVB-H/T and CMMB for mobile and portable multimedia solutions. OMNITUNE™ TUA 9001 covers VHF, UHF as well as L-bands for Europe and US frequency ranges. It can be operated with either a single or dual supply with a power consumption as low as 18mW at 10% duty cycle operation in DVB-H mode and 190mW in DVB-T mode.

With its 50Ohm RF inputs and external LNA support, the device is suited for applications that require a single VHF/UHF antenna input and excellent sensitivity.

OMNITUNE™ TUA 9001 supports a wide range of crystal and external reference frequencies. It features an integrated wide-band RF AGC, a programmable channel filter, as well as a fully integrated VCO and PLL loop filter.

### Applications

- Mobile devices such as mobile phones, PDA, game stations and personal media players
- Portable applications such as laptops, USB sticks, PC cards and automotive infotainment
- TV receivers with DVB-H/T and CMMB functionality (portable and handheld)

### Features

- Direct Conversion Receiver
- Supports MBRAI Class b2 and c
- 0.13um RF CMOS
- Quad band support : 170 MHz-240MHz VHF, 470MHz-890MHz UHF, 1.45GHz-1.49GHz L-Band and 1.672GHz L-Band)
- Integrated wide-band RF AGC

Note: The OMNITUNE trade mark is owned by Infineon Technologies AG.

- Single supply or dual supply voltage for lowest power consumption
- Less than 18mW (10% D/C)
- Less than 190mW in DVB-T mode
- Low power modes and power scalability
- Fractional-N synthesizer with fully integrated VCO and loop filter
- External reference frequency input available
- Supports crystal and reference frequencies from 16 to 38.4MHz
- Fast on/off cycling: From idle to receive in <1ms
- Integrated, programmable 7th order Chebyshev channel filter for 5, 6, 7 and 8MHz channel bandwidth
- Fully differential analog I/Q interface
- Support single antenna input for VHF and UHF Band

### Benefits

- Optimized low power solution
- Minimum PCB area and component count
- No SAW filter required
- Supports time slicing
- External LNA supported, e. g. BFR 380, for optimum performance please contact Infineon

### Product Available in

- PG-WFSGA-65 (5x5x0.8mm)

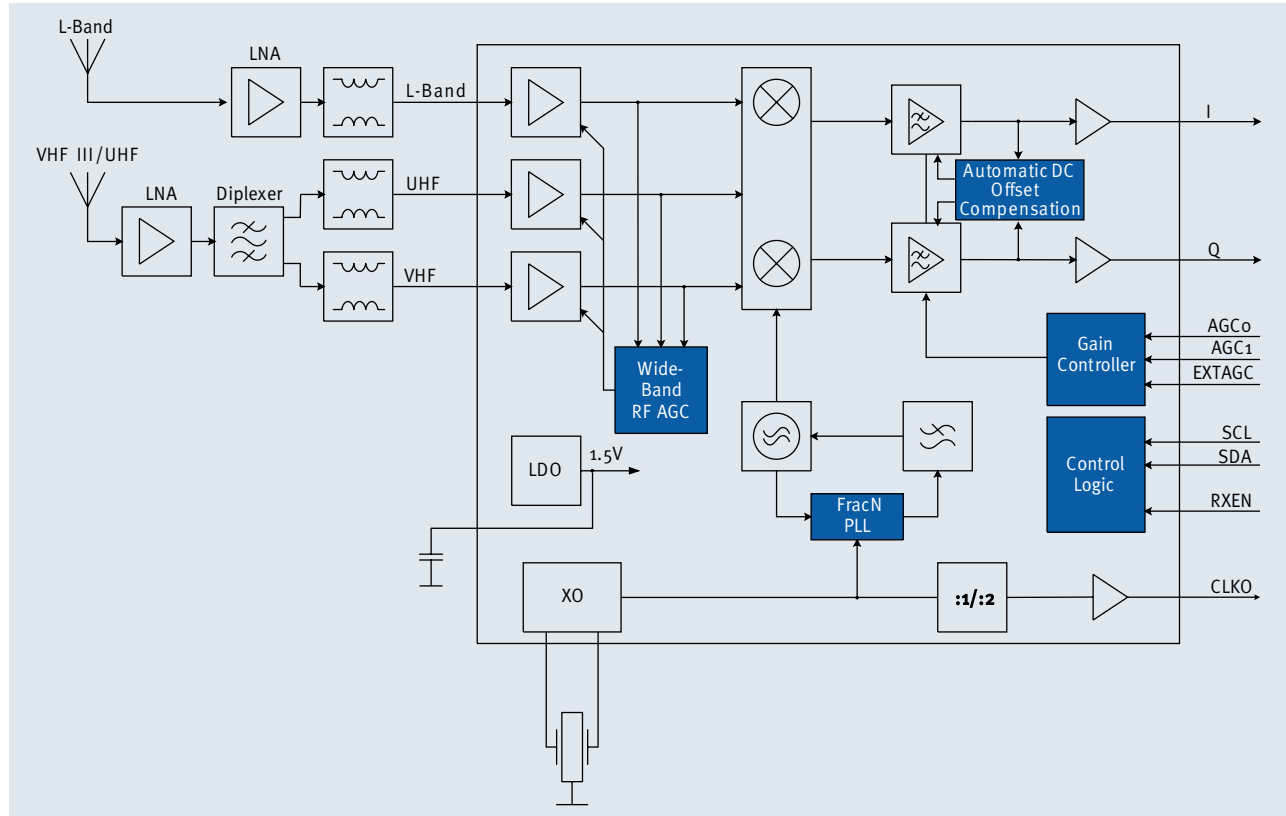
[www.infineon.com/tuner](http://www.infineon.com/tuner)

## Communication Solutions

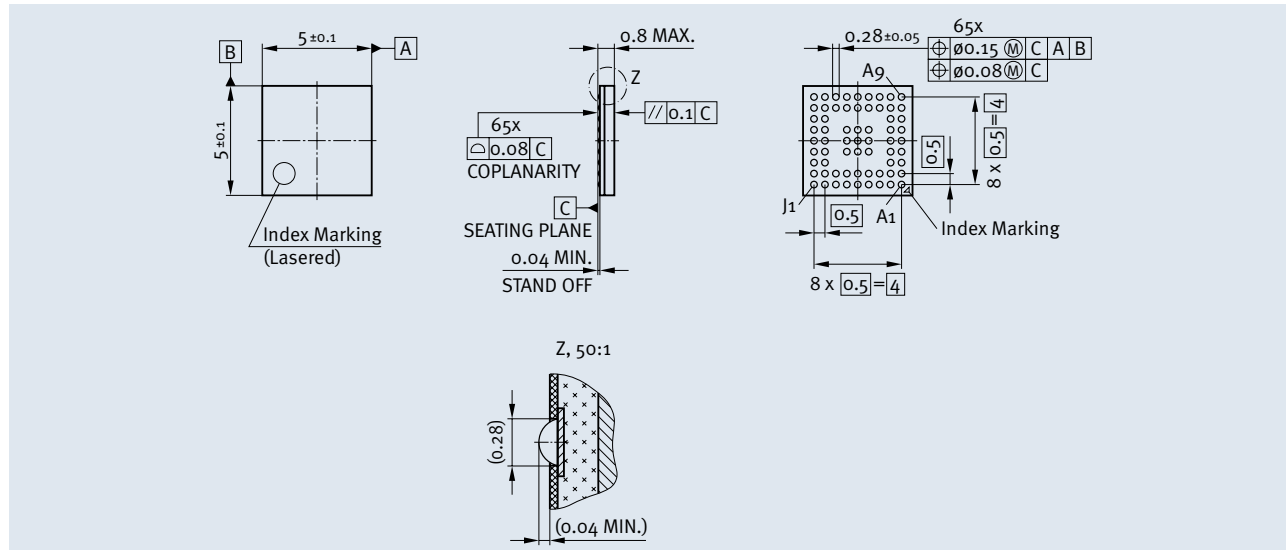


Never stop thinking

## Block Diagram



## Package Diagram (WFSGA-65)



How to reach us:

<http://www.infineon.com>

Published by  
Infineon Technologies AG  
81726 Munich, Germany

© Infineon Technologies AG 2008.  
All Rights Reserved.

### Legal Disclaimer

The information given in this Product Brief shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffensgarantie"). With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

### Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office ([www.infineon.com](http://www.infineon.com)).

### Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system.

Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

Ordering No. B129-H9125-X-X-7600