

PMB 5701

SMARTi 3G - The First Single-Chip Multi-Band CMOS Radio Frequency (RF) UMTS Transceiver IC



SMARTi 3G IS THE WORLD'S first single-chip multi-band UMTS transceiver IC. It is designed to be used in mobile applications complying with the W-CDMA UTRA FDD system requirements. Supporting all currently used UMTS bands it fully covers the worldwide demand with its different regional frequency requirements in Europe, Asia, North America and Japan.

Applications

- UMTS standard compliant
- Low area, and low power UMTS / W-CDMA solution
- HSDPA/HSUPA data devices

Features

- General
 - Direct conversion receiver
 - Direct modulation transmitter
 - Integrated VCOs
 - Integrated PLL
 - Supporting GSM dual-receive
 - Supporting compressed mode
 - Flexible 3-wire bus configuration
- Tx Section
 - RF VGA's with > 85 dB gain range
 - High-linearity mode for HSDPA
- Rx Section
 - Complete analog baseband path without external components
 - Separate Rx PGC 3-wire bus operation possible
 - HSDPA capability (up to category 8)

Technology

- Based on Infineon's C11 130 nm RF-CMOS technology
- PG-WFSGA-81 leadless package
 - 5.0 x 5.0 mm
 - Green product (lead (Pb) and halogen free)
- Supply voltage range from 2.7 V to 3.0 V

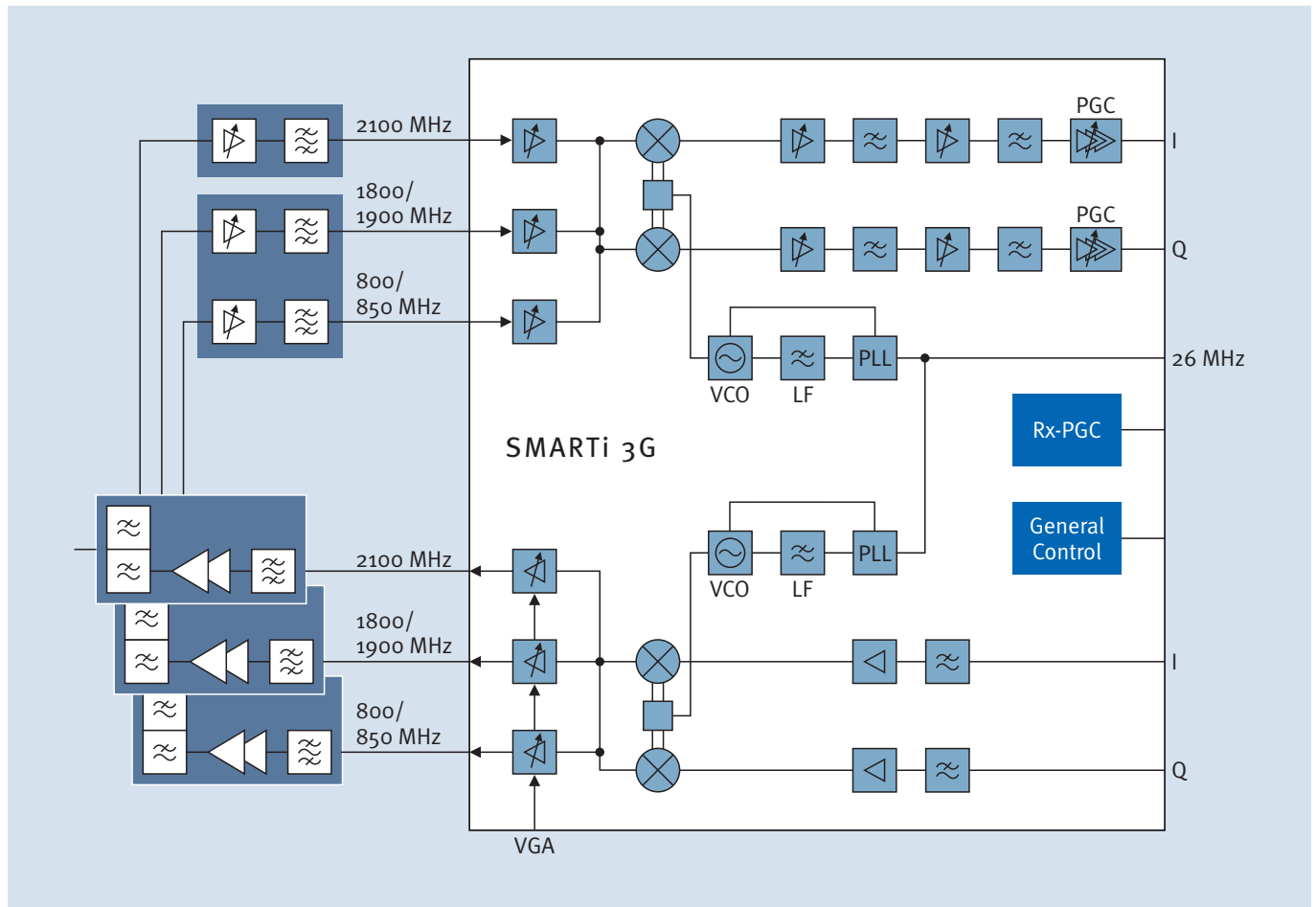
www.infineon.com/wireless

Communication Solutions



Never stop thinking

SMARTi 3G Triple Band Application Example



Operating Frequency Bands

The transceiver is capable to operate in the following paired frequency bands:

| Operating Band | Band Name | Tx Band [MHz] | Rx Band [MHz] |
|----------------|--------------|---------------|---------------|
| Band I | 2100 | 1920 – 1980 | 2110 – 2170 |
| Band II | 1900 | 1850 – 1910 | 1930 – 1990 |
| Band III | 1700 or 1800 | 1710 – 1785 | 1805 – 1880 |
| Band IV | 1.7/2.1 | 1710 – 1755 | 2110 – 2155 |
| Band V | 850 | 824 – 849 | 869 – 894 |
| Band VI | 800 | 830 – 855 | 875 – 900 |
| Band IX | 1700 | 1750 – 1785 | 1845 – 1880 |

How to reach us:
<http://www.infineon.com>

Published by
 Infineon Technologies AG
 81726 Munich, Germany

© Infineon Technologies AG 2006.
 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 ("Beschaffenheitsgarantie"). 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).

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. B134-H8640-G2-X-7600
 Printed in Germany
 PS 0107 nb