

The TUA 6030 is a 3band Multimedia IC which combines a MOPLL (Mixer, Oscillator and digitally programmable Phase Locked Loop) on-chip in SCT architecture (Single Conversion Tuner). The IC supports all analog and digital standards for cable applications which makes RF design of tuner and STB manufacturer easier-one for all.

The TUA 6030 combines digital performance and smallest packaging with advanced consumer BOM (Bill Of Material) and Multimedia architecture. 2nd generation 3band Multimedia IC is TUA 6034. This IC supports additionally DVB-T (COFDM) standard by most advanced phase noise. TUA 6034 in combination with Discretes (MosFet, Diodes), 2nd Mixer (TDA 619X) and COFDM Demodulator (SQC 610X) leads to a complete Infineon digital terrestrial frontend.



Application

- The IC is suitable for PAL and NTSC tuners in TV - and VCR-sets or set-top receivers for analog TV and Digital Video Broadcasting as well as analog and digital Cable tuner/modems.

General Features

- Suitable for PAL/NTSC, Digital Video Broadcasting (DVB-C and ATSC, OPEN CABLE
- Full ESD protection

Mixer/Oscillator

- High impedance mixer input (common emitter) for LOW band
- Low impedance mixer input (common base) for MID band
- Low impedance mixer input (common base) for HIGH band
- 2 pin oscillator for LOW band
- 2 pin oscillator for HIGH band
- 4 pin oscillator for HIGH band

IF-Amplifier

- IF preamplifier with symmetrical 75 output impedance able to drive a SAW filter (500//40 pF)

PLL

- 4 independent I²C addresses
- I²C bus protocol compatible with 3.3 V and 5 V micro-controllers up to 400 kHz
- Short lock-in time
- High voltage VCO tuning output
- 4 PNP ports
- 3 NPN ports
- 1 NPN port/ADC input
- Internal LOW/MID/HIGH band switch
- Lock-in flag
- Programmable reference divider ratio (24, 64, 80, 128)
- Programmable charge pump current

Ordering Information

Type	Ordering Code	Package	Availability
TUA 6030	Q67037-A1146	P-TSSOP-38	ES 1/2001
Reference Tuner	Q67030-A1166	Price: 250 €	1/2001
Evaluation Board	Q67030-A1096	Price: 75 €	1/2001

ES = Engineering Samples

T U A 6 0 3 0

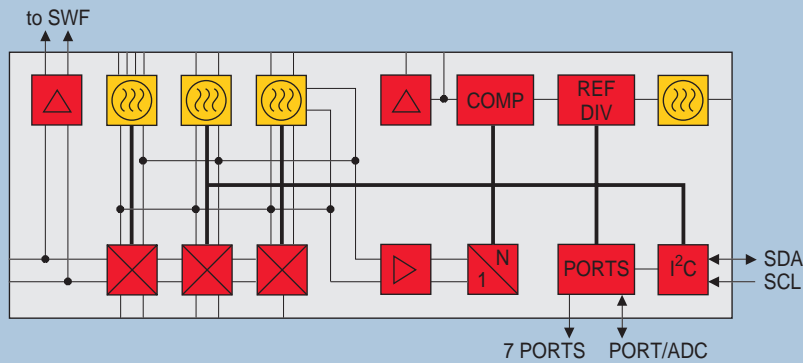
Single Conversion

One-Chip-Multimedia IC



Never stop thinking.

TUA 6030 Block Diagram



Benefits

- ONE solution for ALL Applications (DVB, ATSC, Analog PAL & NTSC, OPEN CABLE)
- Overall COFDM System know-how at Infineon
- Single chip MOPLL solution
- 3band MOPLL guarantees best performance in each band (VHF1, 2 and UHF)
- Improved phase noise performance - 90 dBc/Hz @ 10 kHz
- DVB reference frequency compliant (166,6 kHz)
- Improved large signal performance
- Drive directly SAW filter
- Can handle standard microcontroller protocol - 3.3 V and 5 V

- Smallest package size world-wide
- 8 ports available for multimedia applications

Documentation / Development and Support Tools

- Specification
- Application Note
- Evaluation Board TUA 6030
- Infineon Reference 3band tuner
- I²C-bus-interface and software

Price Projection

- For key- and focus accounts or high volumes you may contact your regional Infineon sales partner

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

Published by
Infineon Technologies AG,
Bereich Kommunikation,
St.-Martin-Strasse 53,
D-81541 München

© Infineon Technologies AG 2000. All Rights Reserved.

Attention please!

The information herein is given to describe certain components and shall not be considered as warranted characteristics.

Terms of delivery and rights to technical change reserved.

We hereby disclaim any and all warranties, including but not limited to warranties of non-infringement, regarding circuits, descriptions and charts stated herein.

Infineon Technologies is an approved CECC manufacturer.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office in Germany or our Infineon Technologies Representatives worldwide.

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.