



Dual-Band Tri-Mode Up Converter/ Driver Amplifier

HPMX-7202

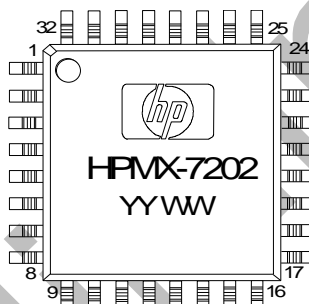
Features

- Dual Band Triple Mode operation
- High output power to directly drive 2-stage Power Amplifier
- 30 dB CDMA driver-amplifier gain control
- Adaptive biasing on CDMA driver-amplifiers
- 2.7 to 3.6 V operation (3.4 to 4.2 V for driver-amplifiers)
- ACPR compliant
- Low receiver band noise
- Power down capability to support puncturing
- JEDEC standard TQFP-32 surface mount package

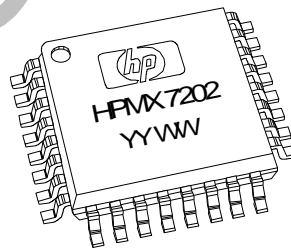
Applications

- IS-95 Dual Band Triple Mode (AMPS, Cellular CDMA, PCS CDMA) handsets
- Wireless Data

Package Pin Configuration



Plastic TQFP-32



General Description

The HPMX-7202 offers a highly integrated solution for CDMA/FM Dual-Band Tri-Mode (DBTM) hand sets. This Integrated Circuit (IC) contains an upconverter, an RF variable gain driver amplifier, two upconverters and driver amplifiers on the cellular transmit chain. The cellular CDMA and AMPS modes are toggled by the mode pin.

The CDMA transmit chain features a low noise floor and optimal linearity to comply with IS-95C requirements. The CDMA driver amplifiers use adaptive biasing scheme, which reduces the gain and bias simultaneously. The CDMA user model indicates the phone will not be operating at maximum output power most of the time. Thus, controlling the gain by a step or continuous function to minimize time in high gain states contributes to increasing talk time. The AMPS mixer and driver amplifier are optimized for lower drawing current.

The operation voltage is optimized for use of a single cell Lithium Ion battery. The mixers are biased from a 3 V regulated supply, and the driver-amplifiers are biased directly from the battery. The power down function supports the puncturing mode and eliminates the need for a power supply switch.

Functional Block Diagram

