



# CDMA/FM Dual-Band Upconverter/Driver Amplifier

## HPMX-7201

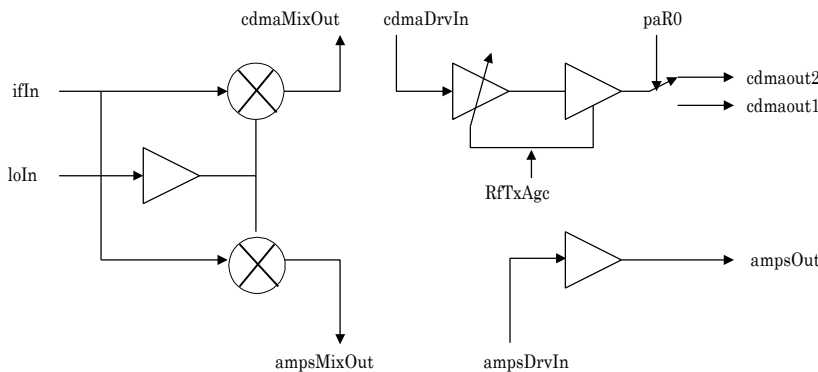
### Features

- Dual Band Dual Mode Operation
- High Output Power to Directly Drive a 2-stage Power Amplifiers
- 30 dB CDMA Driver Gain Control
- Adaptive Biasing on CDMA Driver (30mA ~ 60mA @7dBm)
- 2.7 ~ 3.6V Operation (3.4 ~ 4.2V for Drivers)
- Switched CDMA Driver Outputs to Support Split-band Filters
- ACPR Compliant
- Low Rx Band Noise
- Power Down Capability to Support Puncturing
- JEDEC Standard TQFP-32 Surface Mount Package

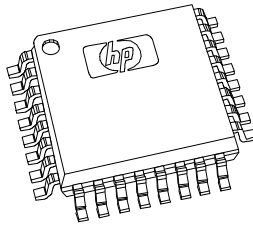
### Applications

- AMPS/CDMA1900 handsets

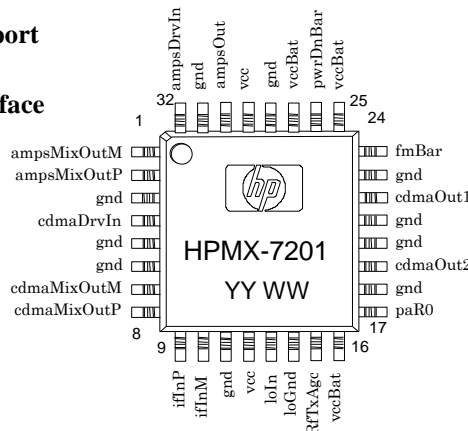
### Functional Block Diagram



### Plastic TQFP-32 Package



### Pin Configuration



### General Description

The HPMX-7201 upconverter offers a highly integrated solution for CDMA/FM dual-band handsets. The HPMX-7201 contains an upconverter, a RF variable gain driver amplifier and a band select switch on the PCS-CDMA transmit chain, and a single sideband upconverter and a driver amplifier on the AMPS transmit chain.

The PCS-CDMA transmit chain features a low noise floor and optimal linearity to comply with J-STD-018 requirements. The CDMA driver is adaptively biased for increased battery life. To support split-band filtering between the driver and the power amplifier, a band-select switch is provided on chip. The single sideband upconverter on the AMPS transmit chain eliminates the need for a filter between the mixer and the driver amplifier.

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

The HPMX-7201 is fabricated using an advanced 25GHz  $f_T$  Silicon bipolar process. This integrated solution leads to improvement in cost and reliability. The industry standard TQFP-32 package and the pin choice minimizes printed circuit board space.