

FEATURES

- Ultra low noise figure: under 2 dB in maximum gain**
- UHF (470 ~ 806 MHz) and VHF (90 ~ 222 MHz) dual RF input**
- Fully compatible with ISDB-T (1/3seg.)**
- Operating dynamic range : -100 dBm ~ 0 dBm**
- Ultra low power consumption : typ. 67/71 mW (1/3seg.)**
- Supply voltage : typ. 1.8 V core and 2.8 V I/O**
- On-chip power on reset**
- Minimal external components : 7RLC + crystal for UHF only**
- Ultra small size WLCSP package (2.14 × 2.09 mm²)**
- On-chip low phase noise and wide frequency range VCO**
- On-chip bandwidth-adjustable band pass filter**
- Integrated IF programable gain amplifier for direct connection to digital demodulators**
- Noise/Linearity optimization through internal RF RSSI and AGC loop**
- Reference clock output for demodulator**
- Adjustable take-over point**
- I²C serial bus interface**
- RoHS compliant**

GENERAL DESCRIPTION

The ADMTV202 is a highly integrated CMOS single chip low-IF single-conversion tuner IC for digital mobile TV. It has dual RF inputs as UHF (470 ~ 806 MHz) and VHF (90 ~ 222 MHz). It supports 1-segment and 3-segment of ISDB-T standard. It includes UHF/VHF LNAs, a RF PGA, a down-conversion mixer, a complex band pass filter, an IF PGA, a VCO and a fractional-N PLL, etc.

The RF PGA is controlled by an internal RF AGC loop and IF PGA is controlled by a demodulator. The ADMTV202's PGAs provide in excess of 120 dB of gain control range.

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FUNCTIONAL BLOCK DIAGRAM

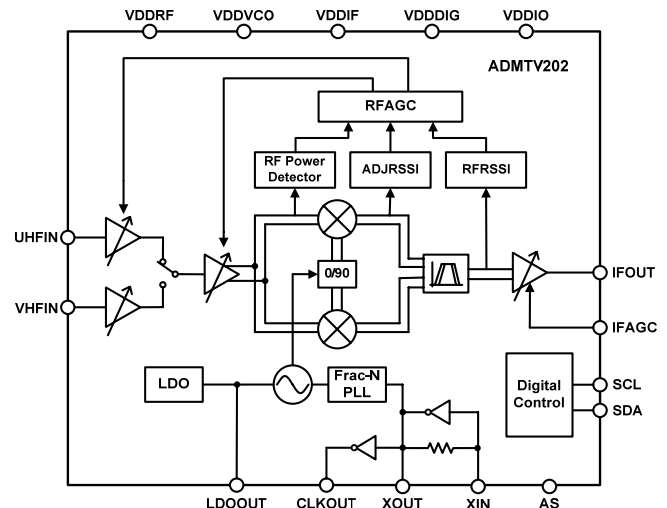


Figure 1.

APPLICATIONS

ISDB-T (1/3seg.) Digital TV for Mobile Phone

Low Power Portable TV, PDA, PMP, Car Navigation and USB Applications

The ADMTV202 consumes ultra low power comparing with conventional tuners. It is the best solution for portable application where low power consumption is required. It has an industry standard I²C serial bus interface. Primary application of the ADMTV202 is the portable terrestrial TV receiver such as mobile TV phone.

PRODUCT HIGHLIGHTS

1. Ultra low noise figure: under 3 dB in maximum gain
2. Frequency range: UHF (470 ~ 806 MHz) and VHF (90 ~ 222 MHz)
3. Low power consumption: typ. 67/71 mW (1/3seg.)
4. Minimal external components: 7RLC + crystal for UHF only
5. Compact size WLCSP package (2.14 mm × 2.09 mm, height 0.4 mm max.)