

Ultralow noise figure: 3 dB in maximum gain
UHF (470 MHz ~ 806 MHz) for ISDB-T in Japan and Brazil
Fully compatible with ISDB-T (one segment only)
Operating dynamic range: -99 dBm to 0 dBm
Ultralow power consumption: 75 mW
Supply voltage: 1.8 V core and 1.8 V ~ 2.8 V I/O
On-chip power-on reset
Minimal external components: 7RLC plus crystal only
Ultrasmall WLCSP package: 2.14 mm × 2.09 mm
On-chip low phase noise and wide frequency range VCO
On-chip bandwidth-adjustable band-pass filter
Integrated IF PGA for direct connection to digital demodulators
Noise/linearity optimization through internal RF RSSI and the IF AGC and RF AGC loops
Reference clock output for demodulator
Adjustable take-over point
I²C serial bus interface
RoHS-compliant WLCSP package

**ISDB-T (one-segment) digital TV for mobile phone
Low power portable TV, PDA, PMP, car navigation, and USB
applications**

The ADMTV202 is a highly integrated, CMOS single-chip, low IF, single-conversion tuner IC for digital mobile TV. It has a single RF input as UHF (470 MHz ~ 806 MHz). It supports one segment of the ISDB-T standard and includes a UHF low noise amplifier (LNA), an RF programmable gain amplifier (RF PGA), a down-conversion mixer, a complex band-pass filter, an IF PGA, a voltage-controlled oscillator (VCO), and a fractional-N phase-locked loop (PLL).

The RF PGA is controlled by an internal RF automatic gain control (RF AGC) loop, and the IF PGA is controlled by a demodulator. The PGAs provide >120 dB of gain control range.

The ADMTV202 consumes ultralow power in comparison to conventional tuners. It is appropriate for portable applications that require low power consumption and includes an industry-standard I²C® serial bus interface. The primary application of the ADMTV202 is the portable terrestrial TV receiver, such as the mobile TV phone.

For more information about the ADMTV202, email Analog Devices, Inc., at Mobile_TV_support@analog.com.

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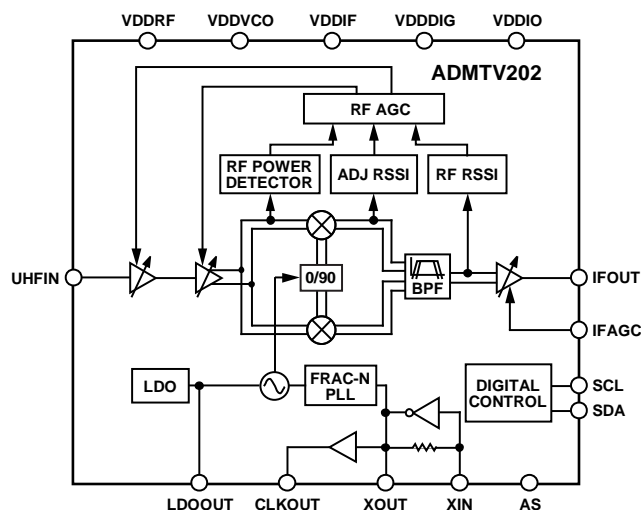


Figure 1.

1. Ultralow Noise: 3 dB Maximum Gain.
2. UHF Frequency Range: 470 MHz ~ 806 MHz for the ISDB-T UHF Band in Japan and Brazil.
3. Low Power Consumption: 75 mW.
4. Minimal External Components. The ADMTV202 requires only the 7RLC plus crystal.
5. Compact WLCSP Package. The ADMTV202 is available in a 2.14 mm × 2.09 mm package, with a maximum height of 0.35 mm.

NOTES

Purchase of licensed I²C components of Analog Devices or one of its sublicensed Associated Companies conveys a license for the purchaser under the Philips I²C Patent Rights to use these components in an I²C system, provided that the system conforms to the I²C Standard Specification as defined by Philips.