

FEATURES

All RF components are integrated in package
ISDB-T 1-seg. Reception
UHF RF Input (Ch13 ~ 62, 470 ~ 770 MHz)
Low-IF architecture which eliminates all SAW filters
Sensitivity Level: -97 dBm (typ.)
(Based on 13segment, C/R=1/2)
High Speed Channel Search Function
Embedded Memory for Time Interleaving
Serial TS (Transport Stream) format data output
Emergency Warning Broadcasting Flag Output
I²C serial bus interface
Ideal for mobile TV receiver, terrestrial set-top-box application
Power consumption: 140 mW (typ.)
Package size is 9 × 9 × 1.4 mm³ (max.)
RoHS Compliant

GENERAL DESCRIPTION

MTV211 is a one-chip receiver that has RF front-end and OFDM demodulator in one package for digital TV application adapted to ISDB-T (1-seg.). All of RF matching components and decoupling capacitors are integrated in package. And the application circuits will be made simple and compact size.

MTV211 is the best solution for mobile application (the portable digital terrestrial TV receiver) with low power consumption and no external components.

The low-IF down conversion RF front-end includes LNAs, PGAs, Image-rejection down-conversion mixers, a bandwidth adjustable low pass filter, an IF variable gain amplifier, a VCO and a fractional-N PLL, etc. On-chip low phase noise VCO along with high-resolution fractional-N frequency synthesizer make in-band phase noise lower than that of any other conventional tuners.

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FUNCTIONAL BLOCK DIAGRAMS

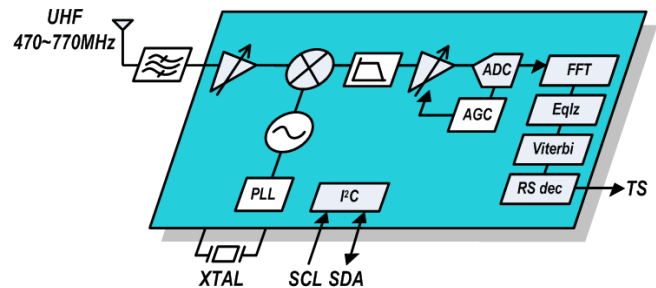


Figure 1.

APPLICATIONS

ISDB-T (1-seg.) Digital TV for Mobile Phone
Compact Size Digital TV Applications
Digital Terrestrial TV and Set-Top Boxes
Low Power Portable TV, PDA and Mobile Phone

The OFDM Demodulator has high-speed channel search function and ARIB STD-B31 compliant decode/FEC system supporting 1-seg. reception. It also has automatic frequency/synchronization function and Mode/GI detection. Backend interface for internal parameter can be controlled and monitored by I²C serial buss interface. It supports only serial TSP format data out.

Its transmission parameters for UHF 1seg. reception are Mode (2, 3), subcarrier modulation (QPSK 1/2, 2/3, 16QAM 1/2) and time de-interleave (1, 2, 4, 8).

PRODUCT HIGHLIGHTS

1. Operating frequency range 440 ~ 770 MHz
2. All RF components are integrated in package
3. Small package size (9 mm × 9 mm)