

FEATURES

Dual tuner for satellite DMB receiver which has diversity function.

Operating frequency range 2605 ~ 2655 MHz

Conform to ITU-R BO.1130-4 Digital System E standard

Low noise figure: 2.0 dB

Wide dynamic range: 0 dBm ~ -98 dBm.

Low power consumption: PDISS = 140 mW at diversity operation.

channel select filter for adjacent channel rejection: 50 dB at 25 MHz

20-bit sigma-delta fractional-N PLL exhibits 36 Hz fine frequency resolution

On-chip low phase noise VCO eliminates external tank circuits

On-chip loop filter for simple application

No external capacitors to remove DC-offset

Ideal for portable application such as mobile phone, notebook PC, and PDA

I²C serial bus interface

Small 36-QFN package (5 × 5 mm²)

FUNCTIONAL BLOCK DIAGRAMS

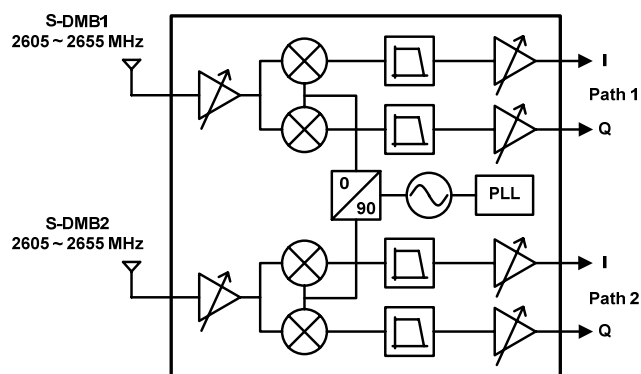


Figure 1.

APPLICATIONS

Satellite DMB mobile phones

Portable satellite DMB receivers: Notebook PC, PDA, and portable multimedia terminals

Satellite DMB receiver for vehicular application

GENERAL DESCRIPTION

The MTV320 is a dual highly integrated zero-IF tuner IC for digital multimedia broadcasting (DMB) diversity receiver via satellite which conforms to ITU-R BO.1130-4 Digital System E standard. It operates from 2605 to 2655 MHz. It includes an LNA and direct conversion down mixers. On-chip low phase noise VCO, which eliminates external tank circuits, generates In phase and Quadrature phase local oscillator. Automatic tuned baseband channel select filters are available with automatic tuning. The MTV320 also includes high dynamic range baseband variable gain amplifier. A low noise amplifier and optimized gain control scheme enable wide dynamic range operation.

The MTV320 consumes less than 140 mW with diversity operation. Power down function reduces the standby mode current consumption for power hungry systems. Using small leadless 36-QFN package, the MTV320 is the best solution for portable DMB application especially for mobile phone, notebook PC, PDA, and etc. where low power consumption is critical. It has an industry standard I²C serial bus interface. Primary application of the MTV320 is the satellite digital multimedia broadcasting system.

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