**QBPS DEMODULATOR**

for satellite receivers of Digital TV

**Description**

The MB86667 is a single-chip demodulator for base band signals of digital satellite broadcasting, compatible with DVB-S (Digital Video Broadcast) and DSS (Digital Satellite System). It consists of two A/D converters (for I-channel and Q-channel), a QPSK demodulator, and forward-error correction decoder, which has Viterbi and Reed-Solomon decoders.

The MB86667 is a perfect solution for all satellite applications, because of its low power consumption, small package size (LQFP48) and short bill of material. The NIM-like evaluation board and the drivers make a short design time possible. The software drivers are also included in the digital TV software of the SmartMPEG family, which allows fast implementation of Free-to-Air zapping applications up to complex PVR applications.

**Typical applications**

- Satellite set-top boxes
- Personal video recorder for satellite reception
- Head-end equipment for satellite reception
- Network Interface Modules (NIM) for satellite reception

**Features**

- DVB-S (SCPC) and DSS compatible
- Operation rate: 1 to 45 Mbaud
- A/D converters for I-channel and Q-channel
- Carrier recovery capture range 1 to 45 Mbaud: ± 5MHz (maximum)
- Built-in carrier frequency difference monitor (via I2C bus)
- C/N monitoring function (via I2C bus)
- IQ automatic detecting function
- Automatic detection of Viterbi code rate (R=1/2, 2/3, 3/4, 5/6, 7/8 for DVB)
- I2C bus interface
- Toner control pins (via FC bus interface or 3 wires)
- TONE output for LNB control
- DiSEqC v1.x compatible
- Input clock: 4MHz or 16MHz
- +3.3V and +1.8V dual-power operation
- Power consumption: typ 490 mW
- Package: LQFP-48
- Operating temperature range: 0 to +70°C

**MB86667 block diagram.**

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