

Stereo, 24-Bit, 192kHz PCM-to-PWM Converter for Full Digital Power Amplifier

Features

- **Sampling Frequency: 32kHz to 192kHz**
- **8X Oversampling at 96kHz**
- **4X Oversampling at 192kHz**
- **Input Audio Data Word: 20-, 24-Bit**
- **130 dB Dynamic Range**
- **120 dB SNR (typical)**
- **Variable Modulation Index: 0.5 to 0.875**
- **PWM Switching Frequency: 256~384kHz**
- **Variable PWM Mapping Method: Both Class AD, BD amplifications are supported**
- **Automatic Sample Rate Detection**
- **System Clock:**
2048fs at 48kHz, 1024fs at 96kHz,
512fs at 192kHz
- **Single 3.3 V Power Supply**
- **28-Lead SOIC Package**

Description

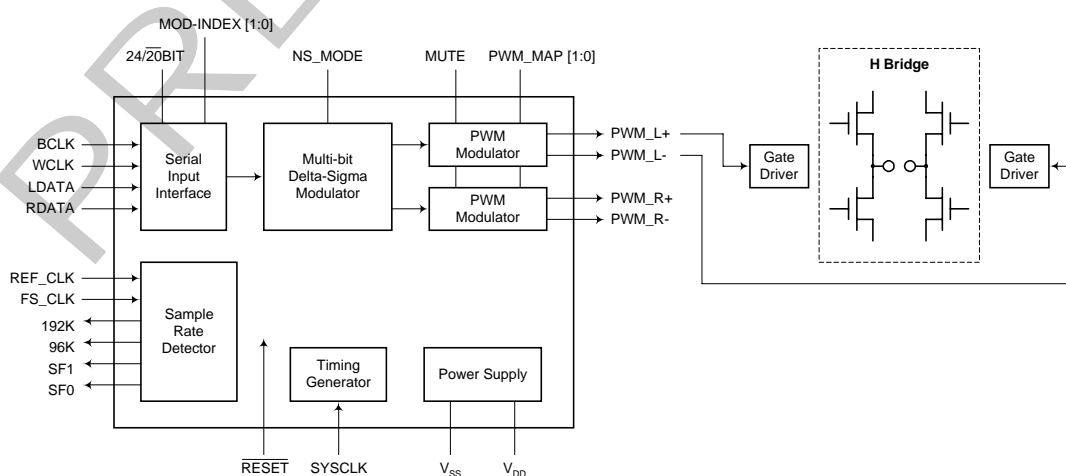
The PS9604 is a high performance, stereo, 24-bit, 192kHz PCM-to-PWM converter IC.

The PS9604 uses a state-of-the-art digital signal-processing algorithm to convert input PCM signal to PWM format without sacrificing the quality of audio signal.

The PS9604 can be used with various 8X oversampling digital filters, for example, DF1704, SM5847, and PMD200. It can be set up to use different modulation indices and PWM mapping methods.

The PS9604's excellent SNR and ultra-low distortion makes it suitable for a size-sensitive consumer power amplifier application where high performance is required, such as high-quality AV receiver, digital TV, and hi-fi amplifiers. A high-end quality full-digital amplifier can be built using the PS9604, with minimal cost.

Application Block Diagram



PRELIMINARY