

All-Digital High Efficiency Power Amplifier

FEATURES

- HIGH OUTPUT CAPABILITY
2x35W into 8 Ω @ <1% THD+N
- SINGLE SUPPLY (+9V to +30V)
- HIGH EFFICIENCY, >88%
- DIGITAL VOLUME CONTROL, ANTI-CLIPPING AND AUTOMATIC MUTE
- THERMAL OVERLOAD AND SHORT CIRCUIT PROTECTION

BENEFITS

- COMPLETE SURFACE MOUNT DESIGN
- SMALL PACKAGE -NO HEAT SINK
- POWER SUPPLY SAVINGS
- ALL DIGITAL - NO DAC

APPLICATIONS

- DIGITAL POWERED SPEAKERS
- PC SOUND CARDS
- CAR AUDIO
- SURROUND SOUND SYSTEMS
- DIGITAL AUDIO COMPONENTS

PRODUCT PREVIEW

The DDX-2000/2060 is a stereo amplifier chip set that implements Apogee's Direct Digital Amplification (DDX®) technology and can provide up to 35 watts per channel at very high efficiency. The design interfaces directly with digital audio sources and completely eliminates the need for digital to analog conversion. The high efficiency operation derived from the use of Apogee's patented damped ternary pulse width modulation provides a 20% efficiency advantage over conventional Class-D amplifiers and up to 300% advantage over typical Class A/B amplifiers. The surface mount design is intended for applications such as digital powered speakers, surround sound systems or any application desiring pure digital sound reproduction.

The DDX-2000 Controller is a 3.3 volt 44 pin QFP digital IC that implements DDX processing. The device includes digital volume control, automatic mute and anti-clipping functionality to simplify product design. The DDX-2060 Power Device is a dual channel Class-D H-Bridge that has a logic interface, integrated bridge driver, high efficiency MOSFETs and protection circuitry. A thermally enhanced package enables circuit board amplifier designs without external heat sinks.

DDX-2000/2060 BLOCK DIAGRAM

