

## 10-W Inductor Free Stereo Audio Amplifier with Low EMI

### DESCRIPTION

- The XA9221D is a high efficiency 2 channel bridged-tied load (BTL) Class-D audio power amplifier, driving stereo speakers at up to 10W/CH with 6Ω or 8Ω Load. The XA9221D features a differential input architecture offering improved noise immunity over a single-ended (SE) input amplifier.
- Advanced EMI Suppression Technology with Spread Spectrum Control enables the use of inexpensive ferrite bead filters at the outputs while meeting EMC requirements for system cost reduction.
- XA9221D is not only fully protected against shorts and overload, an adjustable power limiter and a DC detection circuit for protection of the connected speakers. The DC detect and Pin-to-Pin, Pin-to-Ground and Pin-to-Power Short Circuit protection circuit protect the speakers from output DC and pin shorts caused in production. The short circuit protection and thermal protection includes an auto recovery feature.
- XA9221D is available in thermally efficient 28-pin ETSSOP package and will be able to output full power on a 2-layer PCB.

### FEATURES

- Wide Supply Voltage: 4.5V to 14.5V
  - Enhanced Modulation Scheme Reduces EMI Emission
  - Loudspeaker power from 12V supply  
BTL Mode: 8W/CH into 8Ω@1% THD+N  
BTL Mode: 10W/CH into 6Ω@<1% THD+N  
BTL Mode: 12W/CH into 4Ω@<1% THD+N  
PBTL Mode: 16W/CH into 4Ω@1% THD+N
  - Loudspeaker power from 12V supply  
BTL Mode: 10W/CH into 8Ω@10% THD+N  
BTL Mode: 13W/CH into 6Ω@10% THD+N  
BTL Mode: 15W/CH into 4Ω@10% THD+N  
PBTL Mode: 20W/CH into 4Ω@10% THD+N
  - Differential Inputs or Single-Ended input
  - Speaker Protection Circuitry
  - 26-dB Fixed Gain
  - Power Limit Function
  - Thermal and Short-Circuit Protection
- 28-pin ETSSOP Package with Thermal Pad  
RoHS compliant and 100% lead(Pb)-free  
Halogen-Free

### APPLICATIONS

- Televisions
- USB Speaker
- Mini Speaker
- Consumer Audio Equipment

### Typical Application Circuit

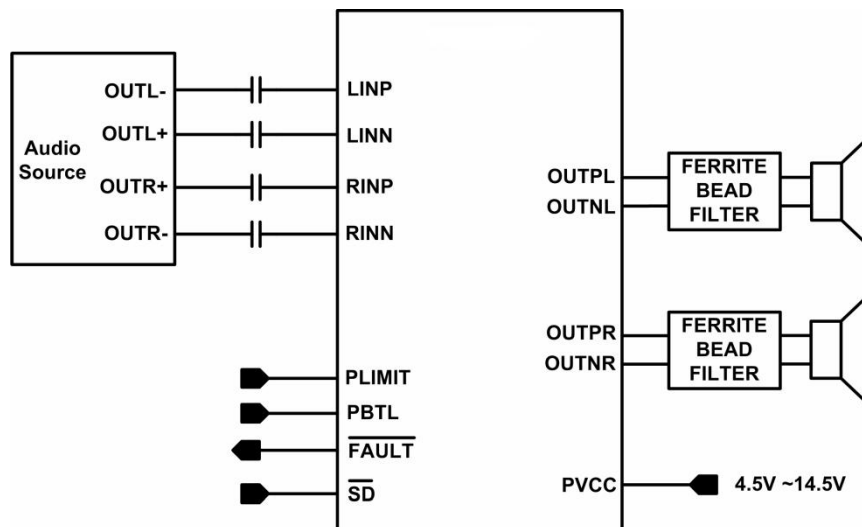


Figure1. Simplified Application Schematic