



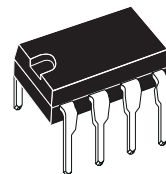
# TDA8199

## STEREO AMPLIFIER AND DC VOLUME CONTROL FOR TV

- Stereo Circuit
- DC Volume Control
- 12dB Maximum Gain

### DESCRIPTION

The TDA8199 is a monolithic integrated circuit in DIP8 package intended for TV applications.



DIP8  
(Plastic Package)

ORDER CODE: TDA8199

Figure 1. Pin Connections

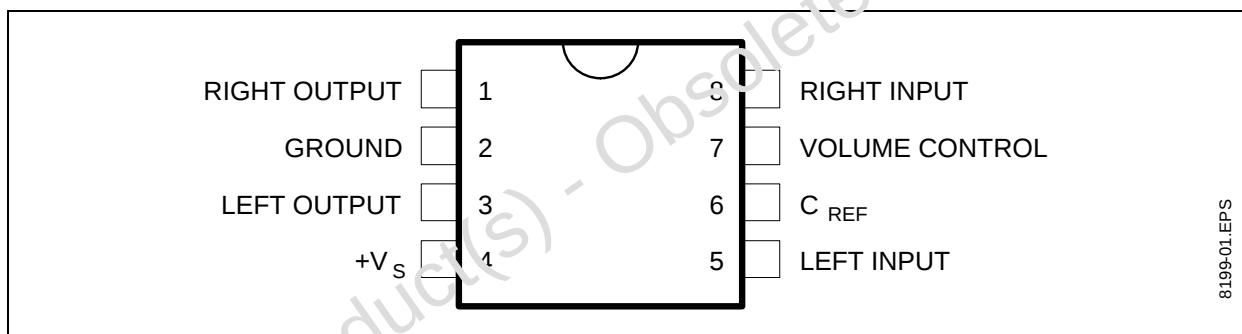
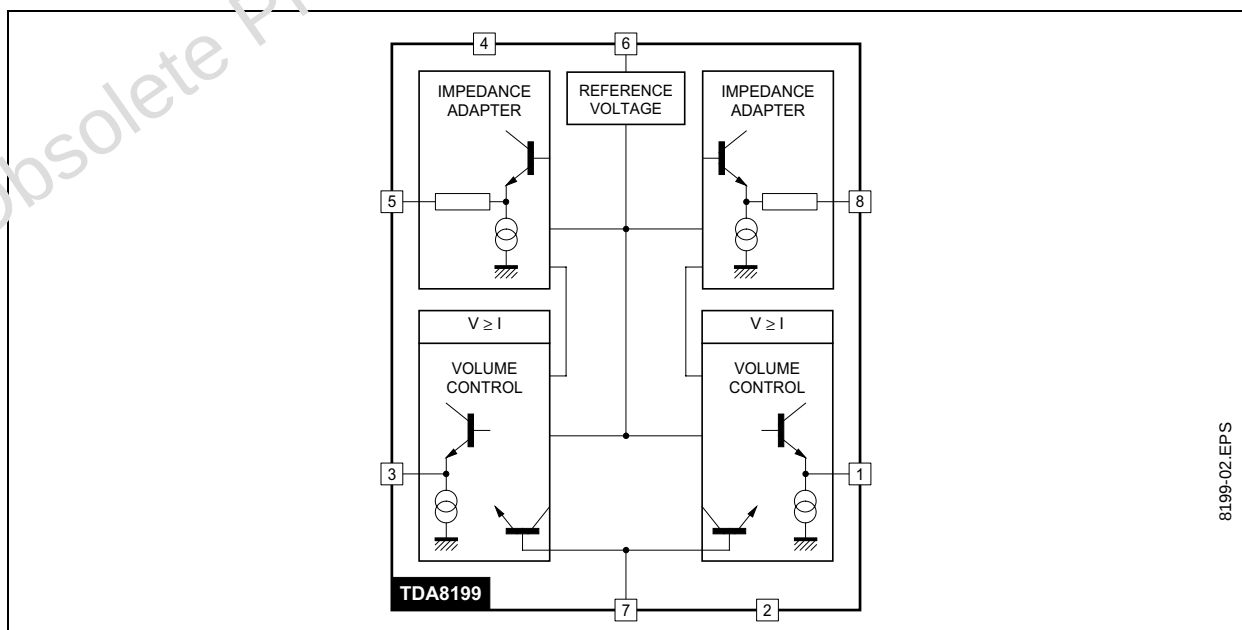


Figure 2. Block Diagram



## TDA8199

### ABSOLUTE MAXIMUM RATINGS

| Symbol     | Parameter                     | Value       | Unit |
|------------|-------------------------------|-------------|------|
| $V_S$      | Supply Voltage (pin 1)        | 16          | V    |
| $T_{stg}$  | Storage Temperature           | - 55 to 125 | °C   |
| $T_{oper}$ | Operating Ambient Temperature | 0 to 70     | °C   |

### ELECTRICAL CHARACTERISTICS

Measured according to the following conditions, unless otherwise specified :  $T_{amb} = 25^{\circ}\text{C}$ ,  $V_S = +12\text{V}$ .

| Symbol    | Parameter                                                                           | Min. | Typ.  | Max. | Unit                         |
|-----------|-------------------------------------------------------------------------------------|------|-------|------|------------------------------|
| $V_S$     | Supply Voltage                                                                      | 10.8 | 12    | 13.2 | V                            |
| $I_S$     | Supply Current ( $V_{IN} = 0$ , $V_C = 0.5\text{V}$ )                               |      | 21    | 28   | mA                           |
| $V_{REF}$ | Reference Voltage                                                                   |      | 6.9   |      | V                            |
| $V_i$     | Audio Input Amplitude                                                               |      | 0.125 | 0.5  | $V_{RMS}$                    |
| THD1      | Distortion for $V_i = 0.25 V_{RMS}$ at Max. Volume                                  |      | 0.35  | 1    | %                            |
| THD2      | Distortion for $V_O = 2 V_{RMS}$                                                    |      |       | 5    | %                            |
| DK        | DC Volume Control Range at $V_i = 0.5 V_{RMS}$                                      | 70   | 90    |      | dB                           |
| Kmin      | Output/Input Gain for Max. Volume ( $V_C = 5\text{V}$ )                             |      | 12    |      | dB                           |
| dK        | Gain Difference between Channels at $V_C = 5\text{V}$                               |      | 0     |      | dB                           |
| $C_C$     | Crosstalk between Channels ( $R_L > 10\text{k}\Omega$ and $F = 1\text{kHz}$ )       |      | 70    |      | dB                           |
| $R_i$     | Audio Input Resistance                                                              |      | 22    |      | $\text{k}\Omega$             |
| $R_O$     | Audio Output Resistance                                                             |      | 0.3   | 1    | $\text{k}\Omega$             |
|           | Output Noise Level at $V_C = 5\text{V}$ (weighted curve : DIN-5405)                 |      | 300   |      | $\mu V_{RMS}$                |
|           | Volume Control Input Current (Pin 7) at $V_C = 0\text{V}$                           |      | - 25  |      | $\mu\text{A}$                |
|           | Volume Thermal Stability ( $K = 30\text{dB}$ , $0 < T_{amb} < 60^{\circ}\text{C}$ ) |      | 0.04  |      | $\text{dB}/^{\circ}\text{C}$ |

Figure 3. Gain versus Volume Control

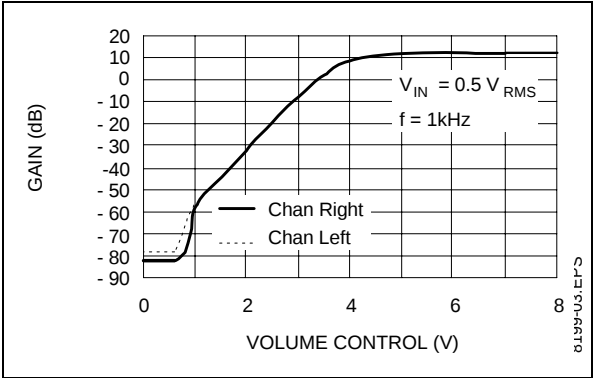


Figure 5. Distortion versus Volume Control

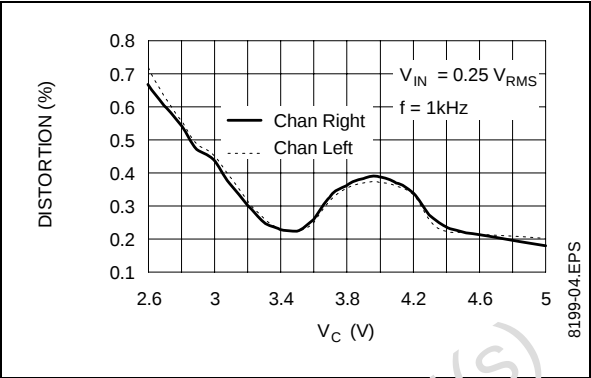


Figure 4. Distortion Rate versus Voltage Input

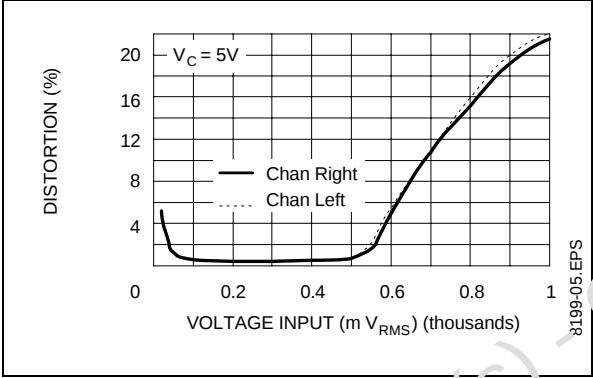


Figure 6. Supply Voltage Rejection

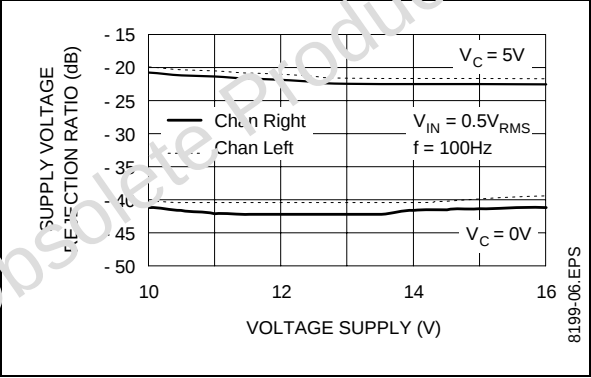
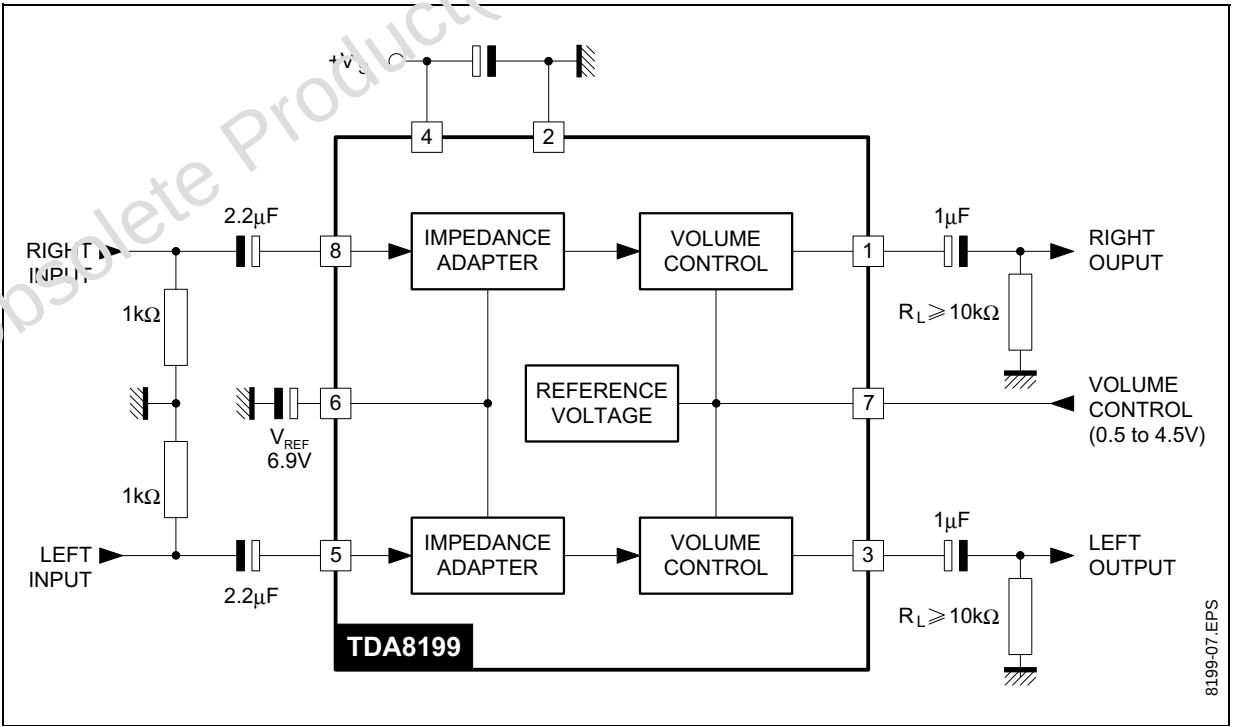


Figure 7. Application Diagram

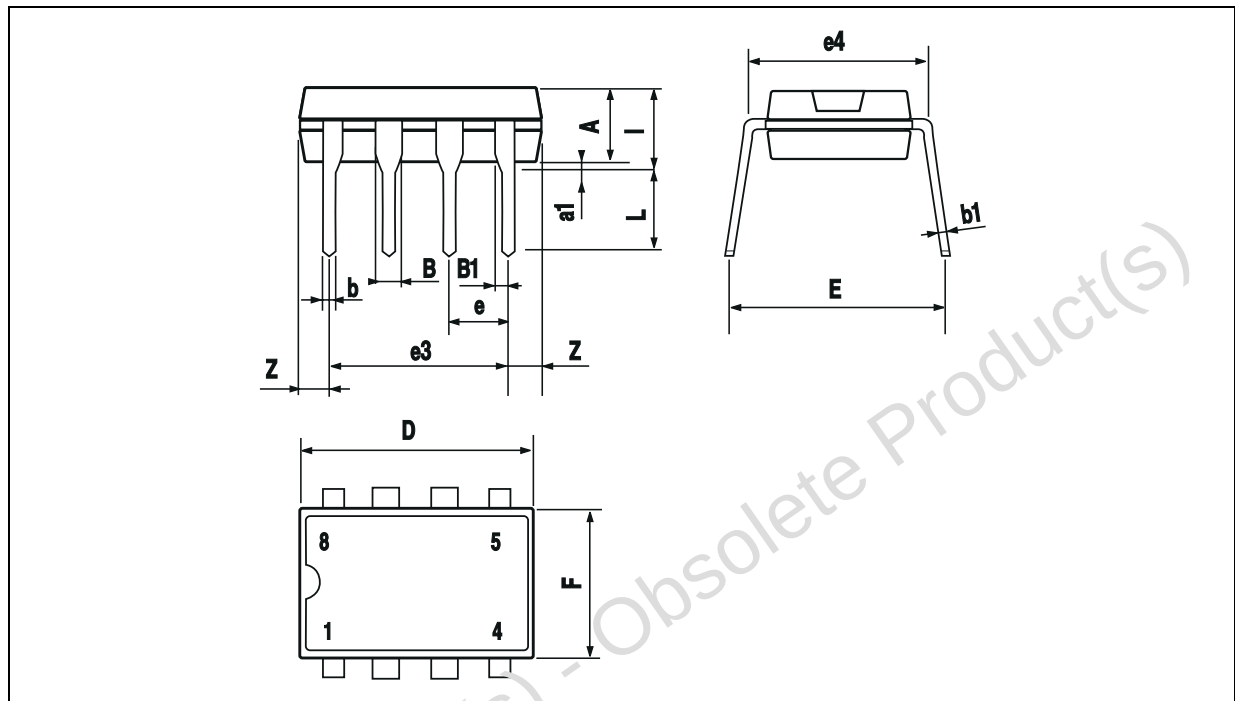


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### PACKAGE MECHANICAL DATA

8-PINS - PLASTIC DIP

Figure 8. 8-Pin Package



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