

# KA2209B

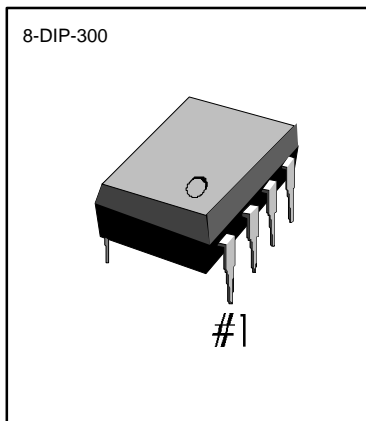
# DUAL LOW VOLTAGE POWER AMP

## INTRODUCTION

The KA2209B is a monolithic integrated audio amplifier in a 8-pin plastic dual in line package. It is designed for portable cassette player and radio.

## FEATURES

- Wide operating supply voltage:  $V_{CC} = 1.8V \sim 9V$
- Low crossover distortion
- Low quiescent circuit current
- Bridge/stereo configuration



## ORDERING INFORMATION

| Device  | Package   | Operating Temperature |
|---------|-----------|-----------------------|
| KA2209B | 8-DIP-300 | -20°C ~ +70°C         |

## BLOCK DIAGRAM

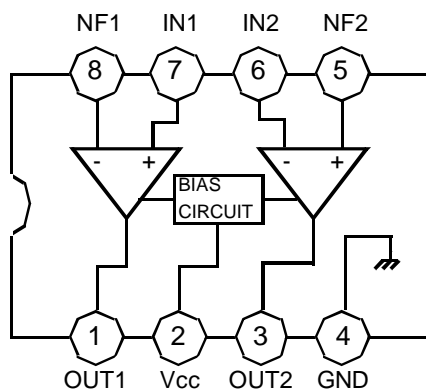


Fig. 1



| Characteristic        | Symbol    | Value   | Unit |
|-----------------------|-----------|---|------|
| Supply Voltage        | $V_{CC}$  | 15  | V    |
| Output Peak Current   | $I_{PK}$  | 1   | A    |
| Power Dissipation     | $P_D$     | at $T_{AMB} = 50^\circ C$ 1.0<br>at $T_{CASE} = 50^\circ C$ 1.4 | W    |
| Operating Temperature | $T_{OPR}$ | -20 ~ +70   | °C   |
| Storage Temperature   | $T_{STG}$ | -40 ~ +150  | °C   |

## ABSOLUTE MAXIMUM RATINGS

## ELECTRICAL CHARACTERISTICS

(T<sub>a</sub>=25°C, V<sub>CC</sub>=6V, f=1KHz, unless otherwise specified)

| Characteristic            | Symbol           | Test Conditions                                    | Min  | Typ | Max  | Unit |   |
|---------------------------|------------------|--|--|-----|------|------|---|
| Operating Voltage         | V <sub>CC</sub>  |  | 1.8  |     | 9    | V    |   |
| Quiescent Circuit Current | I <sub>CCQ</sub> | V <sub>i</sub> = 0                                 |  | 9   |      | mA   |   |
| Closed Loop Voltage Gain  | G <sub>VC</sub>  | Stereo   |  | 40  |      | dB   |   |
|                           |                  | Bridge   |  | 40  |      | dB   |   |
| Channel Balance           | C <sub>B</sub>   | Stereo   | - 1  | 0   | 1    | dB   |   |
| Output Power              | P <sub>O</sub>   | Stereo   | V <sub>CC</sub> = 6V, R <sub>L</sub> = 4Ω, THD=10% | 0.4 | 0.65 |      | W |
|                           |                  |  | V <sub>CC</sub> = 3V, R <sub>L</sub> = 4Ω, THD=10% |     | 0.11 |      | W |
|                           |                  | Bridge   | V <sub>CC</sub> = 6V, R <sub>L</sub> = 8Ω, THD=10% | 0.9 | 1.35 |      | W |
|                           |                  |  | V <sub>CC</sub> = 3V, R <sub>L</sub> = 4Ω, THD=10% |     | 0.35 |      | W |
| Total Harmonic Distortion | THD              | Stereo, R <sub>L</sub> = 8Ω, P <sub>O</sub> = 0.2W |  | 0.5 |      | %    |   |
|                           |                  | Bridge, R <sub>L</sub> = 8Ω, P <sub>O</sub> = 0.5W |  | 0.5 |      | %    |   |
| Ripple Rejection Ratio    | RR               | Stereo, f=100HZ, C <sub>3</sub> = 100uF            | 24   | 30  |      | dB   |   |
| Output Noise Voltage      | V <sub>NO</sub>  | Stereo, BW(-3dB) = 20Hz ~ 20KHz                    |  | 0.5 | 2.0  | mV   |   |
| Cross Talk                | CT               | Stereo, f=1KHZ                                     |  | 50  |      | dB   |   |
| Input Resistance          | R <sub>I</sub>   |  | 100  |     |      | KΩ   |   |

APPLICATION CIRCUIT

1. STEREO

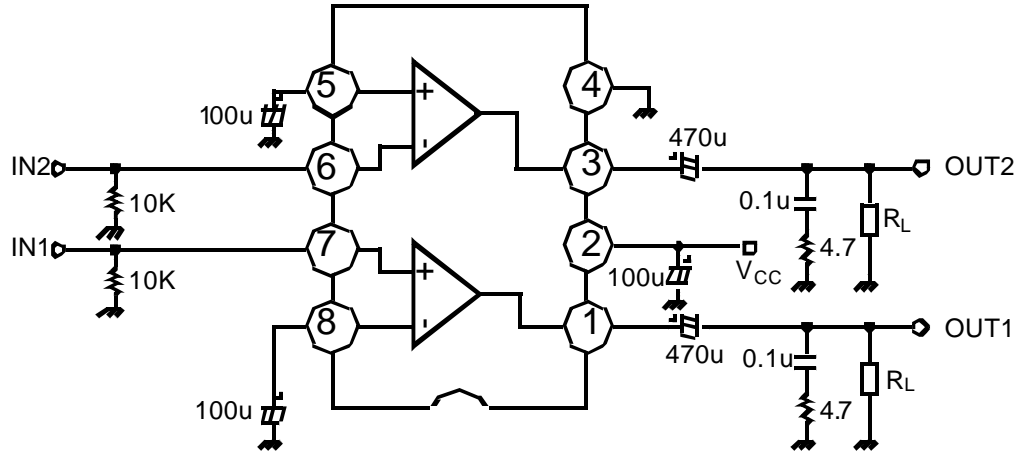


Fig. 2

2. BRIDGE

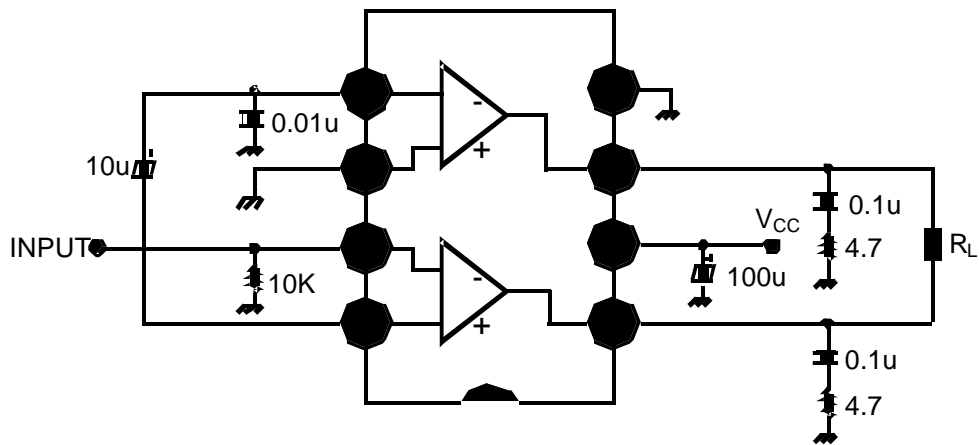
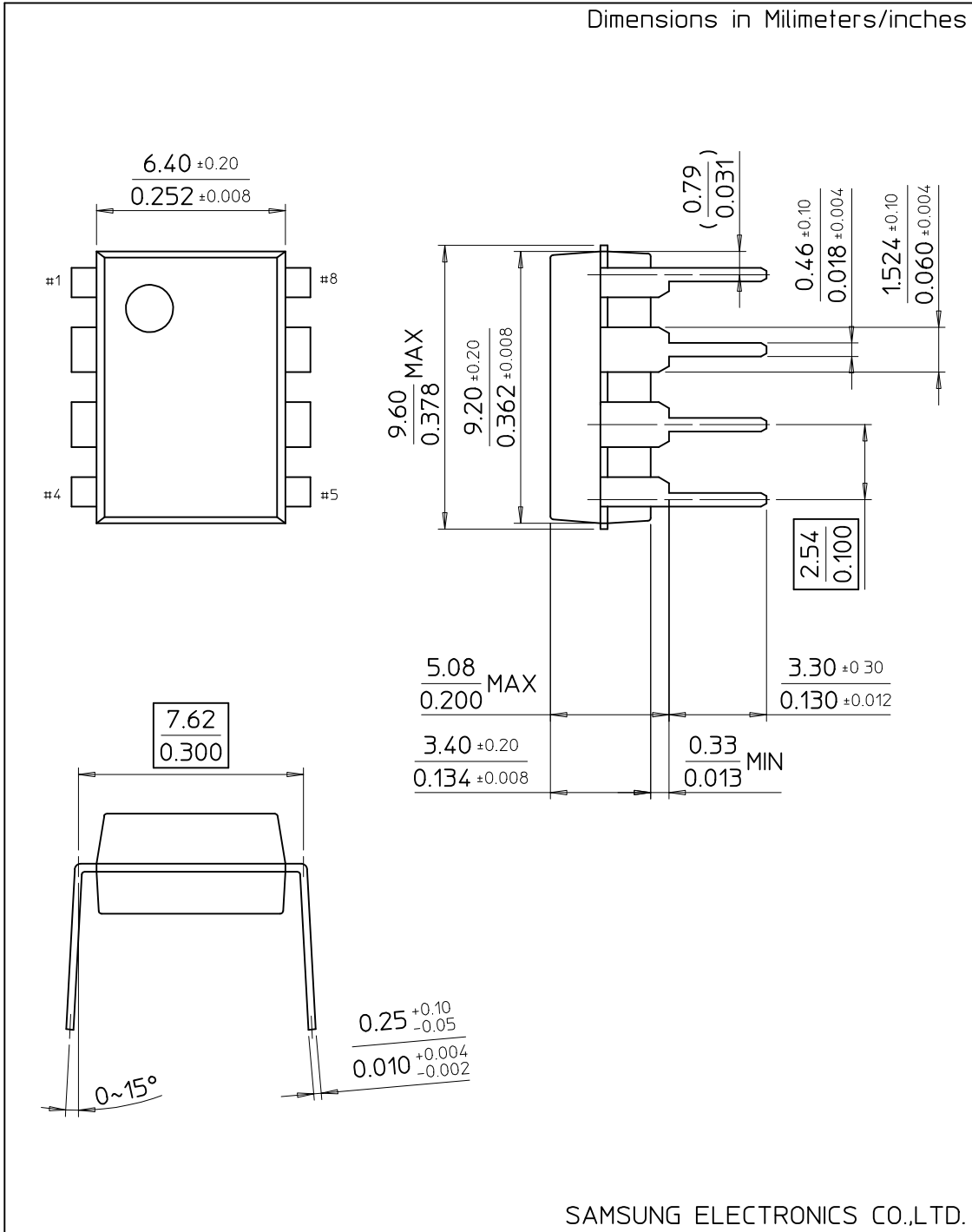


Fig. 3

# 8-DIP-300

Dimensions in Millimeters/inches



SAMSUNG ELECTRONICS CO.,LTD.