



## LM4862

CMOS IC

### AUDIO POWER AMPLIFIER WITH SHUTDOWN MODE

#### DESCRIPTION

The UTC **LM4862** is a built in bridge-connected form audio amplifier. In normal operation, it can deliver 500 mW (typ.) continuous power. The output load of the UTC **LM4862** should be 8Ω, the supply voltage should be 5V, and the THD is as low as 1%.

As the most popular amplifiers, **LM4862** is also designed to be able to provide high quality output power with less external components, such as the output capacitors for coupling, bootstrap capacitors, or snobbery networks.

In applications, the UTC **LM4862** can be specially used as an ideal in low-power portable systems, for example, portable computers, desktop computers, and low voltage audio systems, etc.

#### FEATURES

- \* Stable Unity Gain
- \* Gain Configuration can be set by External Components

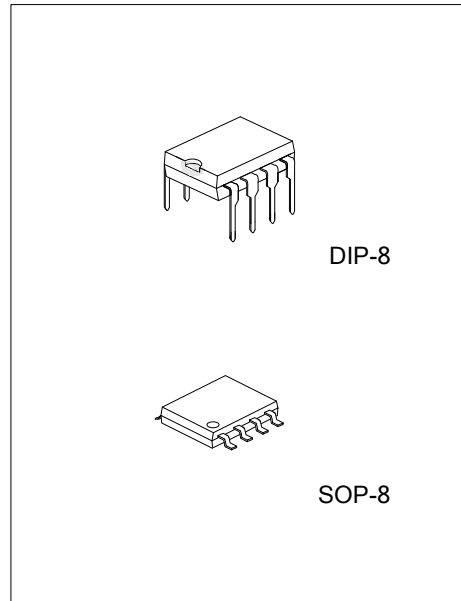
#### ORDERING INFORMATION

| Ordering Number |               | Package | Packing   |
|-----------------|---------------|---------|-----------|
| Lead Free       | Halogen Free  |         |           |
| LM4862L-D08-T   | LM4862G-D08-T | DIP-8   | Tube      |
| -               | LM4862G-S08-R | SOP-8   | Tape Reel |

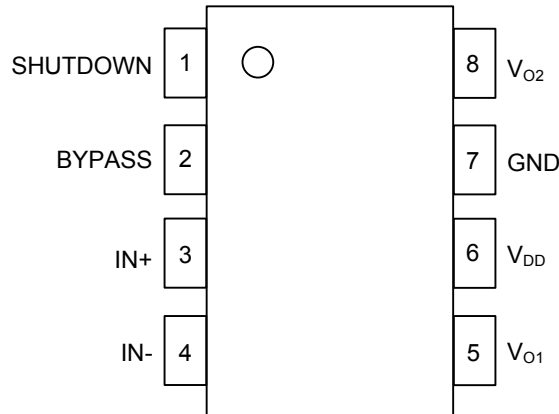
|   |   |
|---|---|
| <p>LM4862L-D08-T</p> <p>(1) Packing Type<br/>(2) Package Type<br/>(3) Green Package</p> | <p>(1) T: Tube, R: Tape Reel<br/>(2) D08: DIP-8, S08: SOP-8<br/>(3) L: Lead Free, G: Halogen Free and Lead Free</p> |
|---|---|

#### MARKING

| DIP-8  | SOP-8  |
|--|--|
| <p>UTC LM4862</p> <p>Date Code<br/>L: Lead Free<br/>G: Halogen Free<br/>Lot Code</p> | <p>UTC LM4862G</p> <p>Date Code<br/>Lot Code</p> |



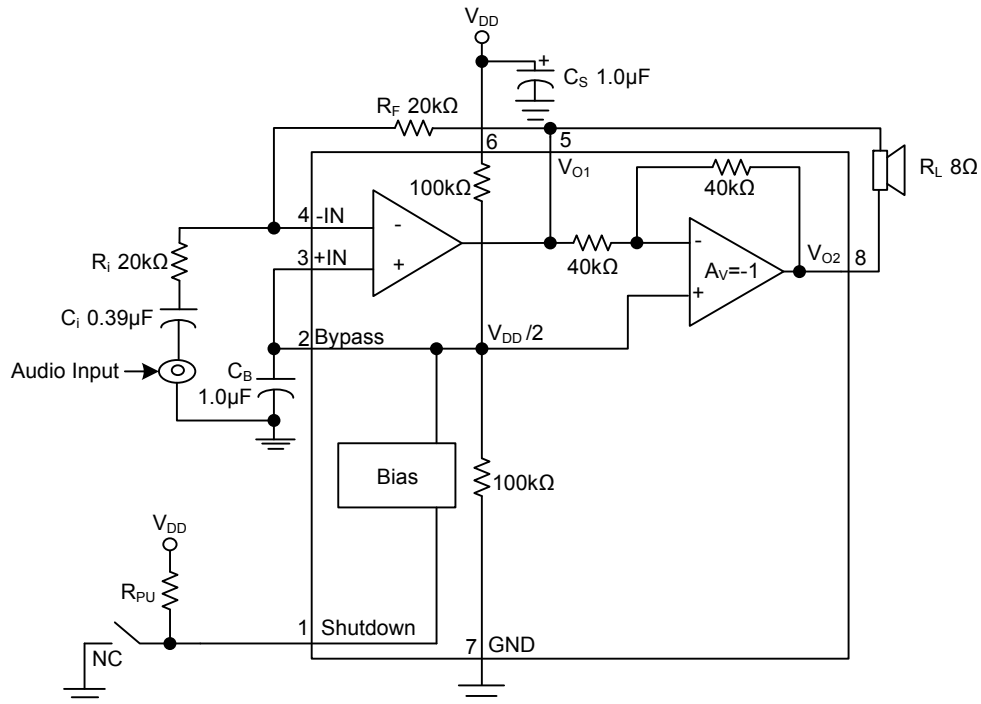
## ■ PIN CONFIGURATION



## ■ PIN DESCRIPTION

| PIN NO | PIN NAME | DESCRIPTION  |
|--------|----------|--|
| 1      | SHUTDOWN | Shutdown mode control input, high active                   |
| 2      | BYPASS   | Connect to internal voltage divider for middle supply bias |
| 3      | IN+      | Non-inverting power input pin                              |
| 4      | IN-      | Inverting power input pin                                  |
| 5      | VO1      | Output power pin 1   |
| 6      | VDD      | Power supply   |
| 7      | GND      | Ground   |
| 8      | VO2      | Output power pin 2   |

## ■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING ( $T_A=25^\circ\text{C}$  unless otherwise specified.)

| PARAMETER            | SYMBOL    | RATINGS                  | UNIT             |
|----------------------|-----------|--------------------------|------------------|
| Supply Voltage       | $V_{DD}$  | 6.0                      | V                |
| Input Voltage        | $V_{IN}$  | -0.3 ~ +(0.3+ $V_{DD}$ ) | V                |
| Power Dissipation    | DIP-8     | 500                      | mW               |
|                      | SOP-8     | 300                      | mW               |
| Infrared (15 sec.)   |           | 220                      | $^\circ\text{C}$ |
| Junction Temperature | $T_J$     | +150                     | $^\circ\text{C}$ |
| Storage Temperature  | $T_{STG}$ | -65 ~ +150               | $^\circ\text{C}$ |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ( $V_{CC}=5\text{V}$ ,  $f=1\text{kHz}$ ,  $T_A=25^\circ\text{C}$  unless otherwise specified.)

| PARAMETER                      | SYMBOL   | TEST CONDITIONS  | MIN | TYP | MAX  | UNIT          |
|--------------------------------|----------|--|-----|-----|------|---------------|
| Supply Voltage                 | $V_{DD}$ |  | 2.0 |     | 5.5  | V             |
| Output Offset Voltage          | $V_{OS}$ | $V_{IN}=0\text{V}$                                     |     | 5.0 | 50   | mV            |
| Quiescent Power Supply Current | $I_{DD}$ | $V_{IN}=0\text{V}$ , $I_o=0\text{A}$                   |     | 6.5 | 12.0 | mA            |
| Shutdown Current               | $I_{SD}$ | $V_{PIN1}=V_{DD}$                                      |     | 0.6 |      | $\mu\text{A}$ |
| Output Power                   | $P_o$    | THD=1%, $f=1\text{kHz}$ , $R_L=8\Omega$                |     | 500 |      | mW            |
|                                |          | THD=10%, $f=1\text{kHz}$ , $R_L=8\Omega$               |     | 800 |      | mW            |
| Total Harmonic Distortion      | THD      | $f=1\text{kHz}$ , $R_L=8\Omega$ , $P_o = 500\text{mW}$ |     | 0.5 |      | %             |
| Power Supply Rejection Ratio   | PSRR     | $V_{CC}=4.9\text{V} \sim 5.1\text{V}$                  |     | 60  |      | dB            |

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