



## TDA2822

### LINEAR INTEGRATED CIRCUIT

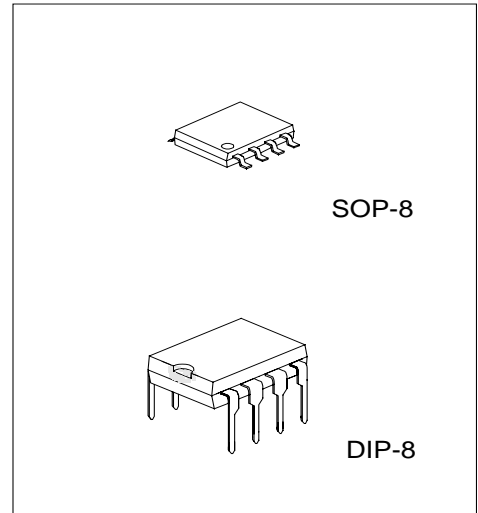
## DUAL LOW VOLTAGE POWER AMPLIFIER

### ■ DESCRIPTION

The UTC **TDA2822** is a monolithic integrated audio amplifier in a 8-Pin plastic dual in line package. It is designed for portable cassette players and radios.

### ■ FEATURES

- \*Wide operating supply voltage:  $V_{CC}=1.8V-12V$ .
- \*Low crossover distortion.
- \*Low quiescent circuit current.
- \*Bridge/stereo configuration.

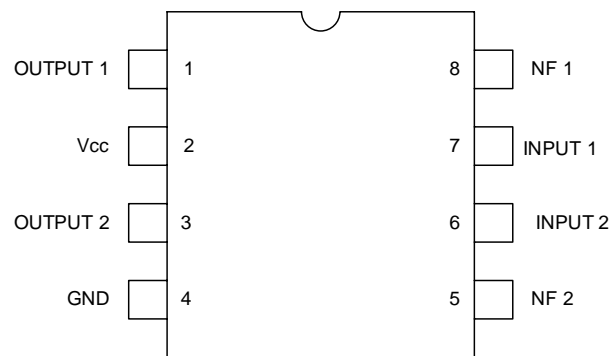


\*Pb-free plating product number: TDA2822L

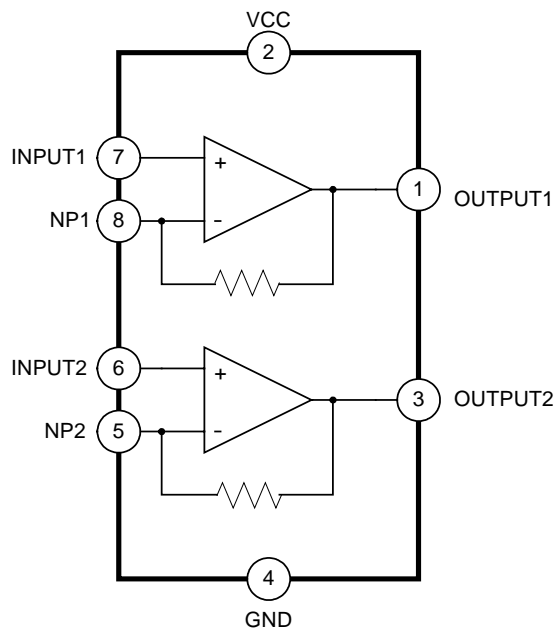
### ■ ORDERING INFORMATION

| Order Number  |                   | Package | Packing   |
|---------------|-------------------|---------|-----------|
| Normal        | Lead Free Plating |         |           |
| TDA2822-S08-R | TDA2822L-S08-R    | SOP-8   | Tape Reel |
| TDA2822-S08-T | TDA2822L-S08-T    | SOP-8   | Tube      |
| TDA2822-D08-T | TDA2822L-D08-T    | DIP-8   | Tube      |

### ■ PIN CONFIGURATIONS



### ■ BLOCK DIAGRAM



### ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

| PARAMETER             | SYMBOL               | RATINGS  | UNIT |
|-----------------------|----------------------|----------|------|
| Supply Voltage        | V <sub>CC</sub>      | 15       | V    |
| Output Peak Current   | I <sub>O(peak)</sub> | 1        | A    |
| Power Dissipation     | DIP-8                | 1.0      | W    |
|                       | SOP-8                | 0.5      |      |
| Operating Temperature | T <sub>OPR</sub>     | -20~+85  | °C   |
| Storage Temperature   | T <sub>STG</sub>     | -40~+150 | °C   |

Note:1. Absolute maximum ratings are stress ratings only and functional device operation is not implied. The device could be damaged beyond Absolute maximum ratings.

2. The device is guaranteed to meet performance specifications within 0 ~70 operating temperature range and assured by design from -20 ~ 85

### ■ ELECTRICAL CHARACTERISTICS (Ta=25°C, V<sub>CC</sub>=6V, f=1kHz, unless otherwise specified)

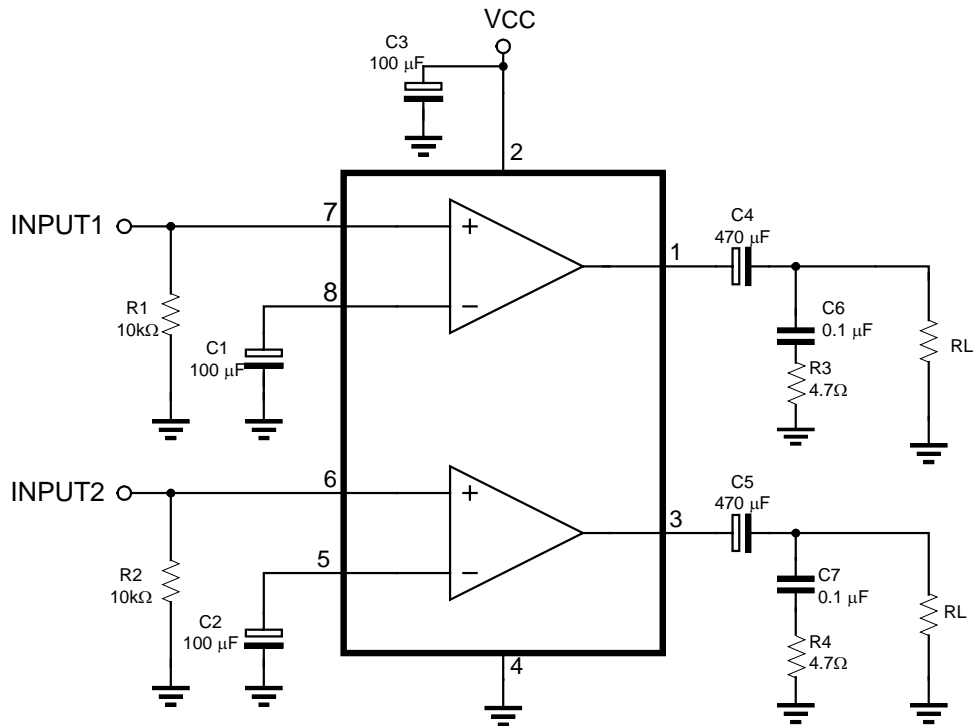
| PARAMETER                 | SYMBOL          | TEST CONDITIONS                                  | MIN  | TYP  | MAX  | UNIT |
|---------------------------|-----------------|--|--|--|------|------|
| Operating Supply Voltage  | V <sub>CC</sub> |  | 1.8  |  | 12   | V    |
| Quiescent Circuit Current | I <sub>CC</sub> | V <sub>IN</sub> =0                               |  | 9  |      | mA   |
| Closed Loop Voltage Gain  | G <sub>Vc</sub> | Stereo   |  | 40   |      | dB   |
|                           |                 |  |  | 40   |      |      |
| Channel Balance           | CB              | Stereo   | -1   | 0  | 1    | dB   |
| Output Power(Stereo)      | DIP-8           | V <sub>CC</sub> =6V, R <sub>L</sub> =4Ω, THD=10% |  | 0.4  | 0.65 | W    |
|                           | SOP-8           |  |  | 0.28                                       | 0.45 |      |
|                           | DIP-8           | V <sub>CC</sub> =3V, R <sub>L</sub> =4Ω, THD=10% |  |  | 0.11 | W    |
|                           | SOP-8           |  |  |  | 0.07 |      |
| Output Power (Bridge)     | DIP-8           | V <sub>CC</sub> =6V, R <sub>L</sub> =4Ω, THD=10% |  | 0.9  | 1.35 | W    |
|                           | SOP-8           |  |  | 0.63                                       | 0.94 |      |
|                           | DIP-8           | V <sub>CC</sub> =6V, R <sub>L</sub> =4Ω, THD=10% |  |  | 0.35 | W    |
|                           | SOP-8           |  |  |  | 0.24 |      |
| Total Harmonic Distortion | Stereo          | THD  | R <sub>L</sub> =8Ω, P <sub>OUT</sub> =0.2W |  | 0.5  | %    |
|                           |                 |  |  | R <sub>L</sub> =8Ω, P <sub>OUT</sub> =0.5W |      | 0.5  |
| Ripple Rejection          | RR              | Stereo, f=100Hz, C3=100μF                        | 24   | 30   |      | dB   |
| Output Noise Voltage      | eN              | Stereo, BW(-3dB)=20Hz ~20kHz                     |  | 0.5  | 2.0  | mV   |
| Cross Talk                | C <sub>T</sub>  | Stereo, f=1kHz                                   |  | 50   |      | dB   |
| Input Resistance          | R <sub>IN</sub> |  | 100  |  |      | kΩ   |

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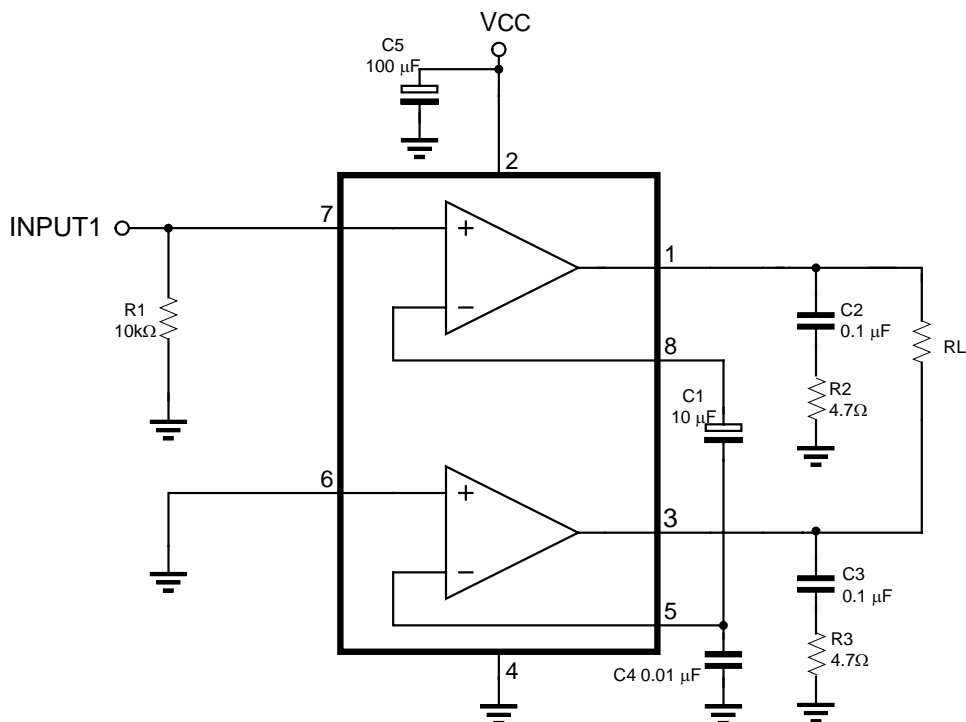
## LINEAR INTEGRATED CIRCUIT

### ■ TEST CIRCUIT

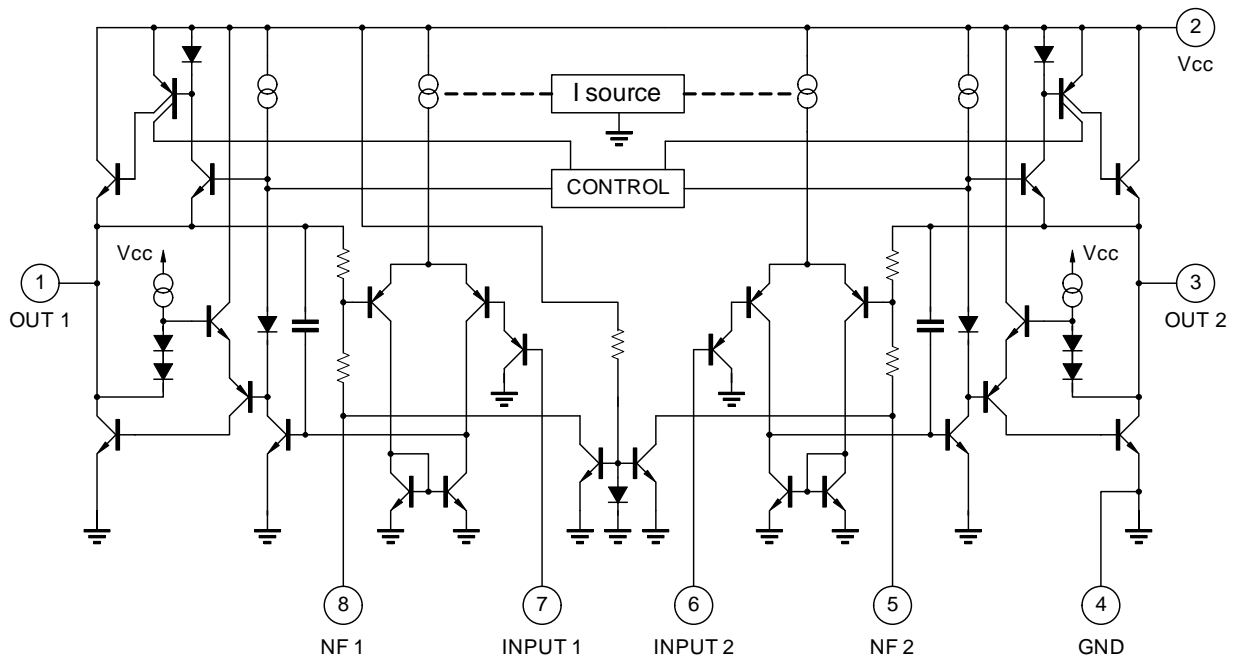
STEREO



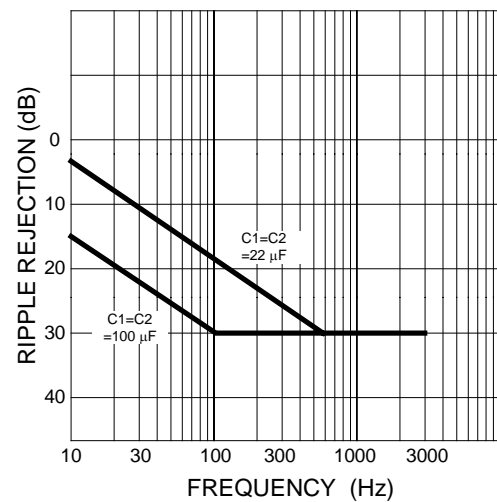
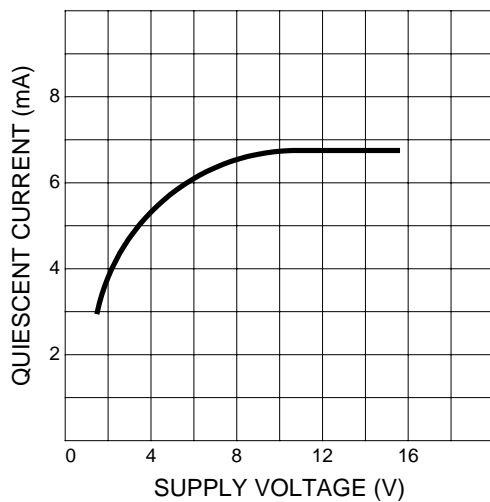
BRIDGE



## ■ SCHEMATIC DIAGRAM



## ■ TYPICAL CHARACTERISTICS



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