



TDA2822H

LINEAR INTEGRATED CIRCUIT

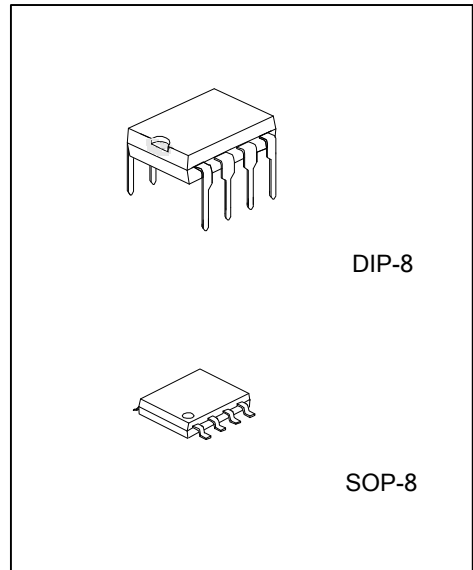
DUAL LOW VOLTAGE POWER AMPLIFIER

■ DESCRIPTION

The UTC **TDA2822H** 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: $V_{CC}=1.8V\sim 6V$.
- *Low crossover distortion.
- *Low quiescent circuit current.
- *Bridge/stereo configuration.

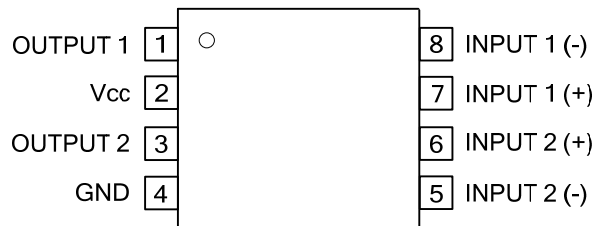


■ ORDERING INFORMATION

| Order Number | | Package | Packing |
|-----------------|-----------------|---------|-----------|
| Lead Free | Halogen Free | | |
| TDA2822HL-D08-T | TDA2822HG-D08-T | DIP-8 | Tube |
| TDA2822HL-S08-T | TDA2822HG-S08-T | SOP-8 | Tube |
| TDA2822HL-S08-R | TDA2822HG-S08-R | SOP-8 | Tape Reel |

| | |
|---|---|
| <p>TDA2822HL-D08-T</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Lead Free</p> | <p>(1) T: Tube, R: Tape Reel</p> <p>(2) D08: DIP-8, S08: SOP-8</p> <p>(3) L: Lead Free, G: Halogen Free</p> |
|---|---|

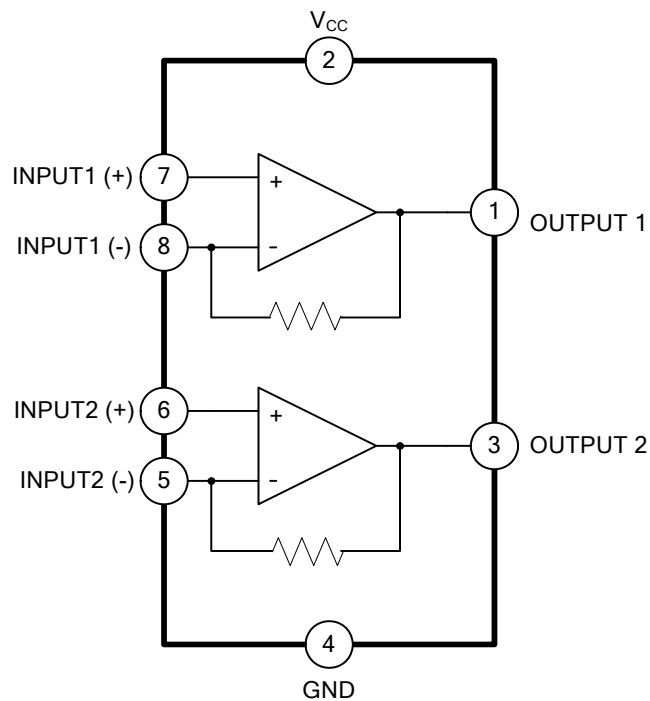
■ PIN CONFIGURATION



■ PIN DESCRIPTION

| PIN NO | PIN NAME | DESCRIPTION |
|--------|-----------------|----------------------------------|
| 1 | OUTPUT 1 | Output of Channel 1 |
| 2 | V _{CC} | Supply Voltage |
| 3 | OUTPUT 2 | Output of Channel 2 |
| 4 | GND | Ground. |
| 5 | INPUT 2(-) | Inverting Input of Channel 2 |
| 6 | INPUT 2(+) | Non-Inverting Input of Channel 2 |
| 7 | INPUT 1 (+) | Non-Inverting Input of Channel 1 |
| 8 | INPUT 1 (-) | Inverting Input of Channel 1 |

■ BLOCK DIAGRAM



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

| PARAMETER | | SYMBOL | RATINGS | UNIT |
|-----------------------|------------------------|----------------------|------------|------------------|
| Supply Voltage | | V_{CC} | 15 | V |
| Output Peak Current | | $I_{O(\text{peak})}$ | 1 | A |
| Power Dissipation | $T_A=50^\circ\text{C}$ | P_D | 1.0 | W |
| | $T_C=50^\circ\text{C}$ | | 1.4 | W |
| | $T_A=50^\circ\text{C}$ | | 0.5 | W |
| Operating Temperature | | T_{OPR} | -20~+85 | $^\circ\text{C}$ |
| Storage Temperature | | T_{STG} | -40 ~ +150 | $^\circ\text{C}$ |

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, $V_{CC}=4.5\text{V}$, BTL parameter, unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | | MIN | TYP | MAX | UNIT | |
|---------------------------|--------------------|---|-----------------------------------|----------------------|-----|----------|---------------|--|
| Operating Supply Voltage | V_{CC} | | | 1.8 | | 6 | V | |
| Quiescent Circuit Current | I_{CCQ} | $R_L=\infty$ | | | 9 | | mA | |
| Output Offset Voltage | V_{OS} | $R_L=8\Omega$ | | | | ± 50 | mV | |
| Input Base Current | I_B | | | | 100 | | nA | |
| Output Power | P_O | $f=1\text{kHz}$, THD=10% | $R_L=32\Omega$ | $V_{CC}=6\text{V}$ | 300 | 320 | mW | |
| | | | | $V_{CC}=4.5\text{V}$ | | 200 | | |
| | | | | $V_{CC}=3\text{V}$ | 50 | 65 | | |
| | | | | $V_{CC}=2\text{V}$ | | 8 | | |
| | | | $R_L=16\Omega$ | $V_{CC}=6\text{V}$ | | 600 | | |
| | | | | $V_{CC}=3\text{V}$ | | 120 | | |
| | | | $R_L=8\Omega$ | $V_{CC}=4.5\text{V}$ | | 700 | | |
| | | | | $V_{CC}=3\text{V}$ | | 220 | | |
| $R_L=4\Omega$ | $V_{CC}=3\text{V}$ | 200 | 350 | | | | | |
| Total Harmonic Distortion | THD | $P_O=0.5\text{W}$, $R_L=8\Omega$, $P_O=1\text{kHz}$ | | | 0.2 | | % | |
| Closed Loop Voltage Gain | A_{VF} | $f=1\text{kHz}$ | | | 39 | | dB | |
| Input Resistance | Z_{IN} | $f=1\text{kHz}$ | | 100 | | | k Ω | |
| Total Input Noise | e_N | $R_s=10\text{k}\Omega$ | $B=22\text{Hz} \sim 22\text{kHz}$ | | 3 | | μV | |
| Supply Voltage Rejection | SVR | $f=100\text{Hz}$ | | | 40 | | dB | |
| Power Bandwidth | BWp | $R_L=8\Omega$, $P_O=1\text{W}$ | | | 120 | | kHz | |

■ APPLICATION CIRCUIT

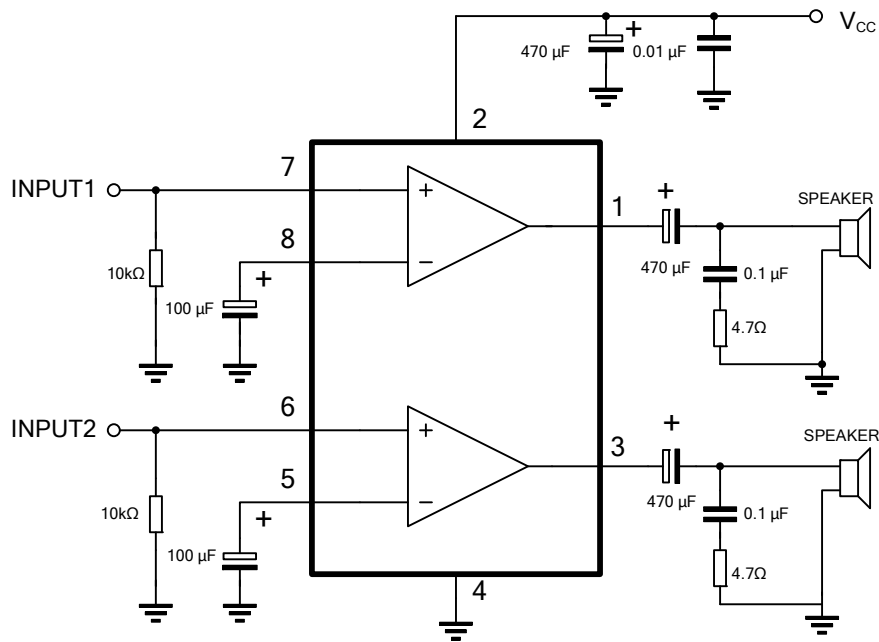


Fig 1. STEREO

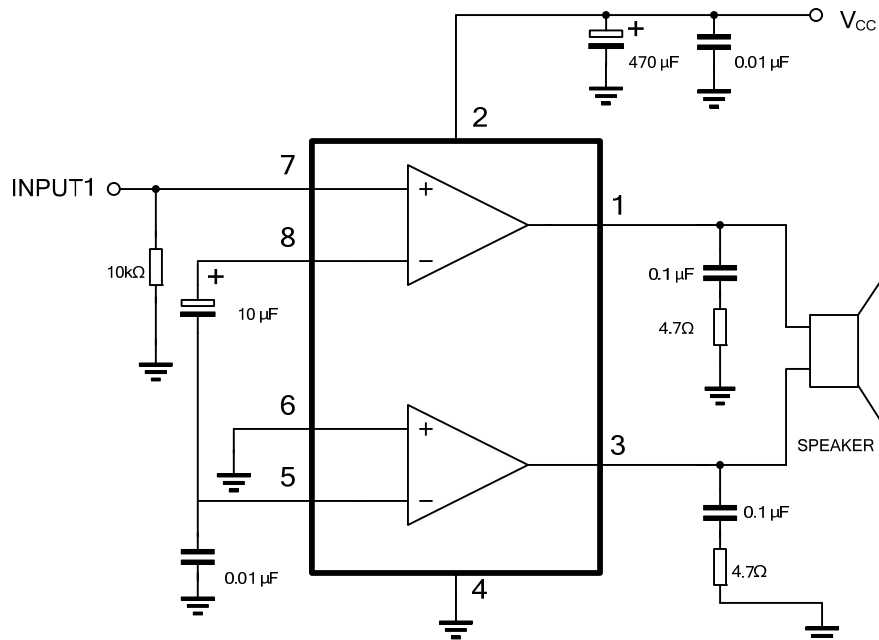


Fig 2. BRIDGE

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