

UTC2822H

LINEAR INTEGRATED CIRCUIT

DUAL LOW VOLTAGE POWER AMPLIFIER

DESCRIPTION

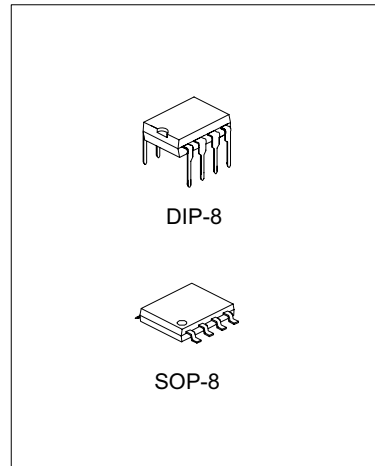
The UTC2822H is a monolithic integrated audio amplifier in a 8-pin DIP and SOP package. It is designed for portable cassette players and radios.

FEATURES

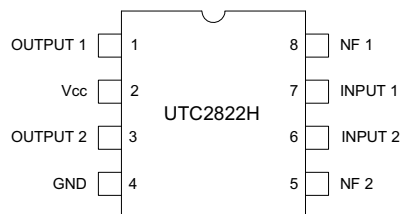
- * Wide operating supply voltage: $V_{cc}=1.8V-6V$
- * Low crossover distortion
- * Low quiescent circuit current
- * bridge/stereo configuration

ORDERING INFORMATION

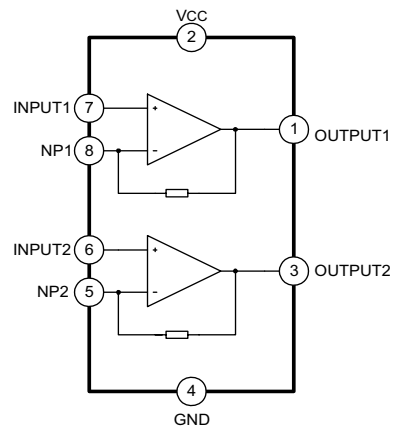
| Device | Package |
|----------|----------------|
| UTC2822 | DIP-8-300-2.54 |
| UTC2822E | SOP-8-225-1.27 |



PIN CONFIGURATION



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

| Characteristic | Symbol | Value | Unit |
|-----------------------|----------------------|---|------|
| Supply Voltage | V _{CC} | 9 | V |
| Output Peak Current | I _{o(peak)} | 1 | A |
| Power Dissipation | P _D | at T _{amb} =50°C 1.0 at T _{case} =50°C 1.4 | W |
| Operating Temperature | T _{opr} | -20~+70 | °C |
| Storage Temperature | T _{stg} | -40~+150 | °C |

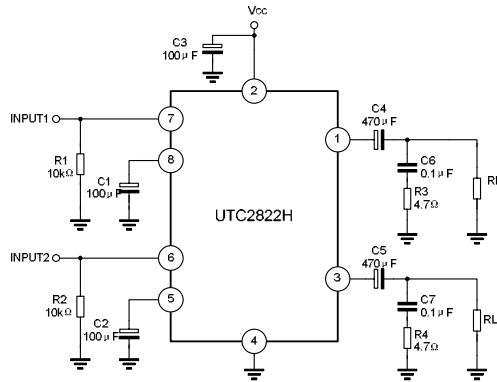
ELECTRICAL CHARACTERISTICS(T_a=25°C, V_{CC}=6V, f=1kHz, unless otherwise specified)

| Characteristic | Symbol | Test Conditions | Min | Typ | Max | Units |
|---------------------------|-----------------|---|-----|------|-----|-------|
| Operating Supply Voltage | V _{CC} | | 1.8 | | 6 | V |
| Quiescent Circuit Current | I _{CC} | V _i =0 | | 6.5 | | mA |
| Closed Loop Voltage Gain | A _v | Stereo | | 40 | | dB |
| Closed Loop Voltage Gain | A _v | Bridge | | 40 | | dB |
| Channel Balance | CB | Stereo | -1 | 0 | 1 | dB |
| Output Power | P _O | Stereo, V _{CC} =3V, R _L =8Ω, THD=10% | | 56 | | mW |
| Output Power | P _O | Stereo, V _{CC} =6V, R _L =8Ω, THD=10% | | 0.35 | | W |
| Output Power | P _O | Bridge, V _{CC} =6V, R _L =8Ω, THD=10% | | 0.7 | | W |
| Output Power | P _O | Bridge, V _{CC} =3V, R _L =8Ω, THD=10% | | 0.15 | | W |
| Total Harmonic Distortion | THD | Stereo, R _L =8Ω, P _o =0.5W | | 0.3 | | % |
| Total Harmonic Distortion | THD | Bridge, R _L =8Ω, P _o =0.5W | | 0.2 | | % |
| Ripple Rejection | RR | Stereo, f=100Hz, C ₃ =100μF | 24 | 30 | | dB |
| Total Input Noise Voltage | V _{NI} | BW(-3dB)=20Hz~20kHz | | 3 | | μV |
| Cross Talk | CT | Stereo, f=1kHz | | 50 | | dB |
| Input Resistance | R _i | | 100 | | | kΩ |

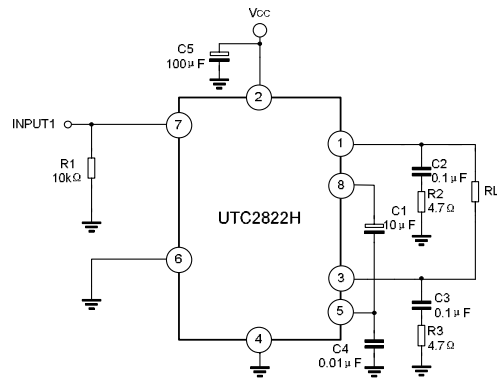
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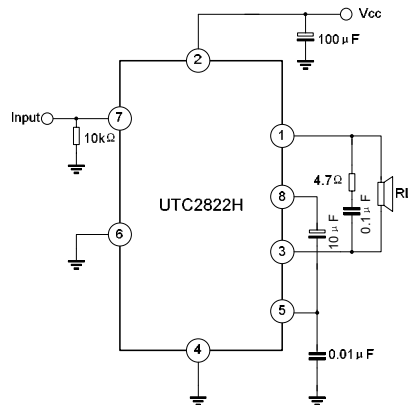
TEST CIRCUIT 1: STEREO



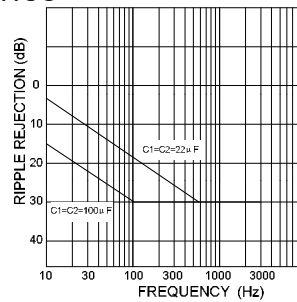
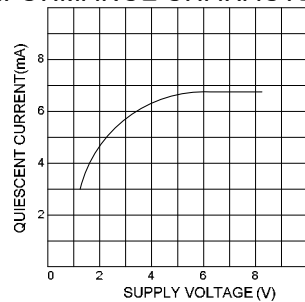
TEST CIRCUIT 2: BRIDGE



BTL APPLICATION CIRCUIT



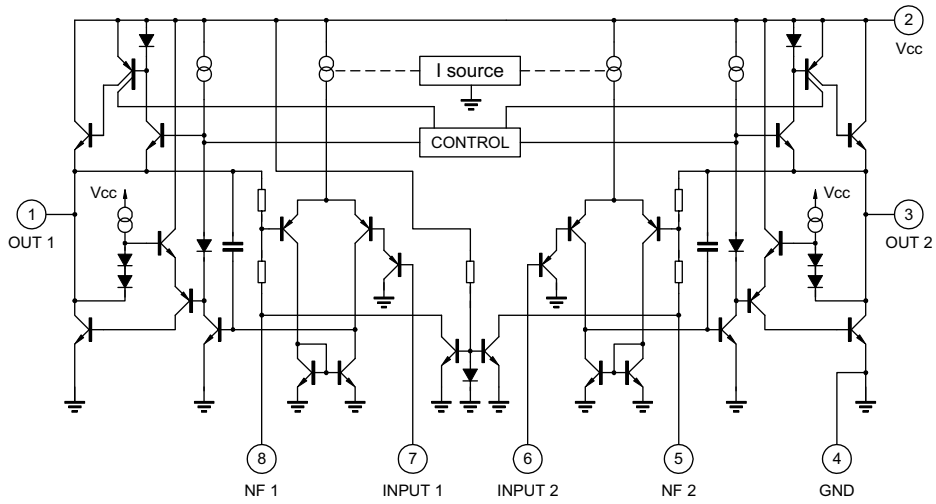
TYPICAL PERFORMANCE CHARACTERISTICS



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SCHEMATIC DIAGRAM



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PACKAGE OUTLINE

