

UTC17821

LINEAR INTEGRATED CIRCUIT

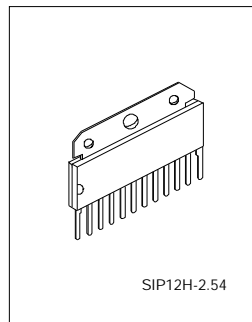
DUAL 5W BTL AUDIO POWER AMPLIFIER CIRCUIT

FEATURES

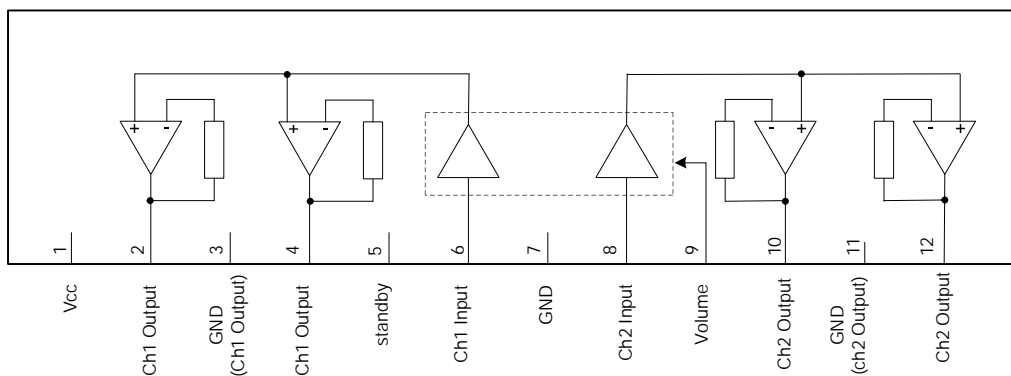
- $V_{CC}=11V$, output=5W (8Ω)
- Built-in standby function
- Built-in DC volume circuits

APPLICATIONS

- TVs, audio equipment, personal computers, active speakers



BLOCK DIAGRAM



PIN DESCRIPTION

| Pin No. | Function | Pin No. | Function |
|---------|-----------------|---------|-----------------|
| 1 | Vcc | 7 | GND(Input) |
| 2 | Ch1 Output(+) | 8 | Ch2 Input |
| 3 | GND(Output ch1) | 9 | DC Volume |
| 4 | Ch1 Output(-) | 10 | Ch2 Output(-) |
| 5 | Standby | 11 | GND(Output ch2) |
| 6 | Ch1 Input | 12 | Ch2 Output(+) |

ABSOLUTE MAXIMUM RATINGS

| Characteristic | Symbol | Value | Unit |
|---|------------------|------------|------|
| Supply Voltage(note2) | Vcc | 14 | V |
| Supply Current | Icc | 2.0 | A |
| Operating Temperature (note1) | T _A | -25 to+70 | °C |
| Storage Temperature(note1) | T _{stg} | -55 to+150 | °C |
| Power Dissipation(T _a =70°C) | P _d | 1920 | mW |

Note1: T_a=25°C except storage temperature and operating ambient temperature.

Note2: At no-signal.

OPERATING SUPPLY VOLTAGE RANGE

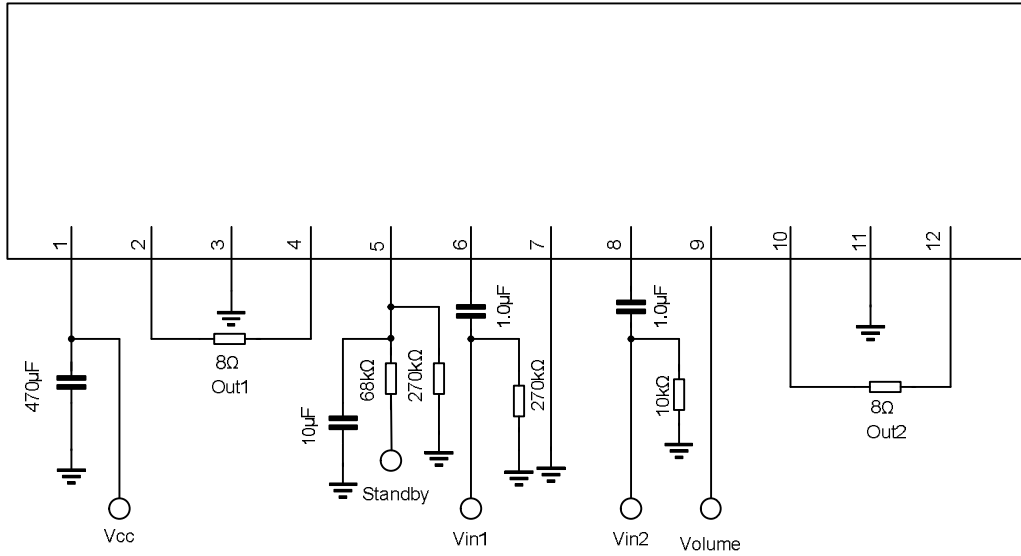
| Characteristic | Symbol | Value | Unit |
|--------------------------------|--------|------------|------|
| Operating Supply Voltage Range | Vcc | 3.5 to13.5 | v |

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}\pm 2^{\circ}\text{C}$, $V_{cc}=5.0\text{V}$, $R_L=8\Omega$, $\text{freq}=1\text{kHz}$)

| Characteristic | Symbol | Test Condition | Min | Typ. | Max | Unit |
|---------------------------|--------|--|------|------|-----|-------|
| Quiescent Current | Icq | Vin=0mV, Vol.=0V | - | 45 | 100 | mA |
| Standby Current | Istb | Vin=0mV, Vol.=0V | - | 1 | 10 | uA |
| Output Noise Voltage | Vno | Rg=10kΩ, Vol.=0V | - | 0.10 | 0.4 | mVrms |
| Voltage Gain | Gv | Po=0.25W, Vol.=1.25V | 32 | 34 | 36 | dB |
| Total Harmonic distortion | THD | Po=0.25W, Vol.=1.25V | - | 0.1 | 0.5 | % |
| Maximum Power Output 1 | Po1 | THD=10%, Vol.=1.25V | 2.4 | 3.0 | - | W |
| Maximum Power Output 2 | Po2 | Vcc=11V THD=10%, Vol.=1.25V | 4.0 | 5.0 | - | W |
| Ripple Rejection Ratio | RR | Rg=10kΩ, Vol.=0V Vr=0.5Vrms, fr=120Hz | 30 | 50 | - | dB |
| Output Offset Voltage | Voff | Rg=10kΩ, Vol.=0V | -250 | 0 | 250 | mV |
| Maximum attenuation | Att | Po=0.25W, Vol.=0V | 70 | 90 | - | dB |
| Input Impedance | Zi | Vin=± 0.3Vdc | 24 | 30 | 36 | kΩ |
| Channel Balance1 | CB1 | Po=0.25W, Vol.=1.25V | -1 | 0 | 1 | dB |
| Channel Balance 2 | CB2 | Po=0.25W, Vol.=0.6V | -3 | 0 | 3 | dB |
| Center Voltage Gain | Gvm | Po=0.25W, Vol.=0.6V | 21 | 24 | 27 | dB |
| Channel crosstalk | CT | Po=0.25W, Vol.=1.25V | 44 | 55 | - | dB |

Note1: For this measurement, use the filter<Bandwidth:15Hz to 30KHz(12dB/octave)>

APPLICATION CIRCUIT



PACKAGE OUTLINE

