

2.4W STEREO AUDIO AMPLIFIER——YD2025H

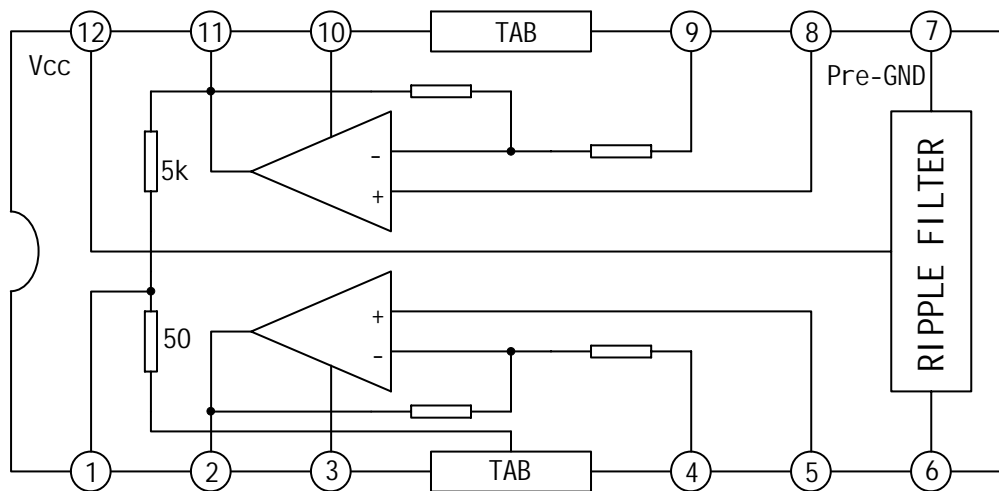
DESCRIPTION

The YD2025H is a monolithic integrated audio amplifier in a 16-pin plastic dual in line package. It is designed for portable cassette players and radios.

FEATURES

- *Working Voltage down to 3V
- *Few External components
- *High channel isolation
- *Voltage gain up to 45dB(Adjustable with external resistor)
- *Soft clipping
- *Internal Thermal protection

BLOCK DIAGRAM



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ABSOLUTE MAXIMUM RATINGS (Tamb=25)

| PARAMETER | SYMBOL | VALUE | UNIT |
|----------------------|------------------|------------|------|
| Supply Voltage | Vcc | 15 | V |
| Output Peak Current | Iop | 1.5 | A |
| Power Dissipation | P _D | 4 | W |
| Junction Temperature | T _j | 150 | |
| Storage Temperature | T _{stg} | -40 ~ +150 | |

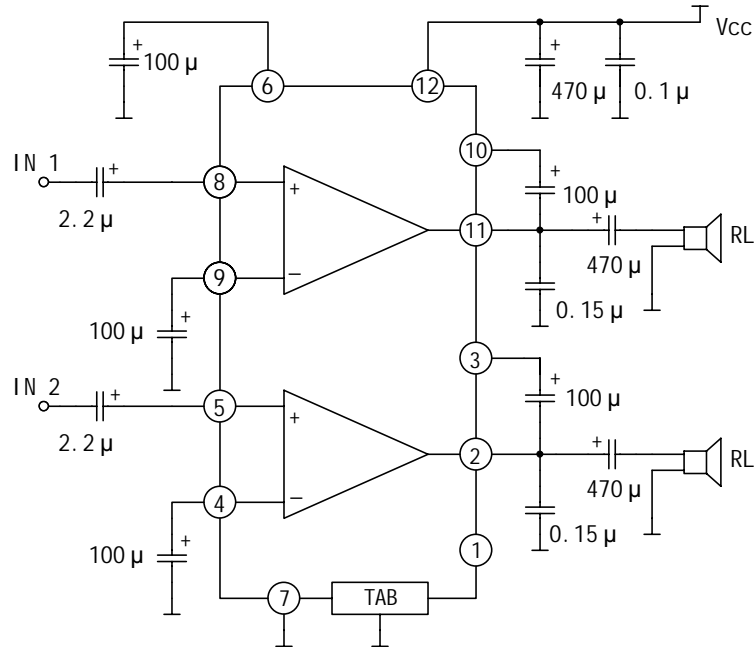
Electrical CHARACTERISTICS

(Tamb=20 , Vcc=9V, f=1kHz, Stereo, Unless otherwise specified)

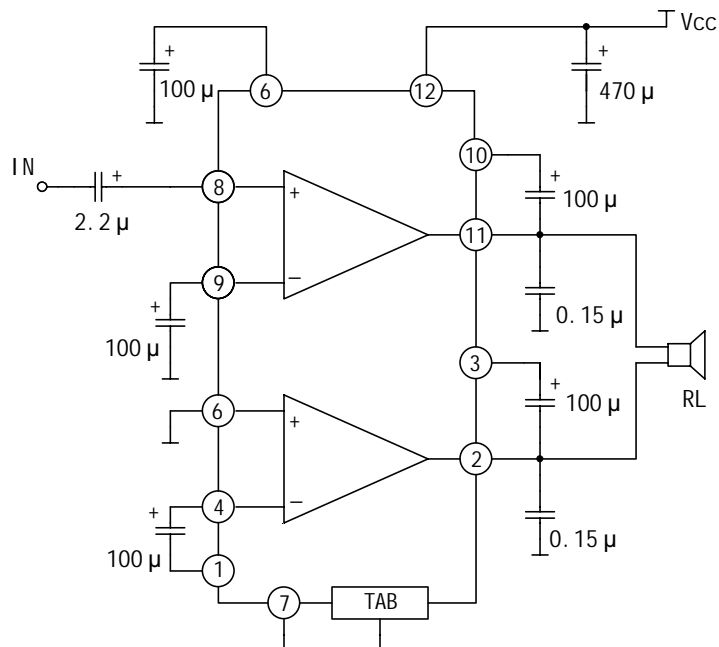
| PARAMETER | SYMBOL | TEST CONDITIONS | NIN | TYP | MAX | UNIT | |
|--------------------------|-----------------|--|---------|-----|-----|------|----|
| Supply Voltage | Vcc | | 3 | | 12 | V | |
| Quiescent Current | Iccq | | | 40 | 50 | mA | |
| Quiescent Output Voltage | Vo | | | 4.5 | | V | |
| Voltage Gain | Gv | Stereo | 43 | 45 | 47 | dB | |
| | | Bridge | 49 | 51 | 53 | | |
| Voltage Gain Difference | Gv | | | | ± 1 | dB | |
| Input Impedance | Zi | | | 30 | | kΩ | |
| Output Power (STEREO) | Po (THD =10%) | Vcc=9V, R _L =4Ω | 1.7 | 2.4 | | W | |
| | | Vcc=9V, R _L =8Ω | | 1.3 | | | |
| | | Vcc=6V, R _L =4Ω | 0.7 | 1 | | | |
| | | Vcc=6V, R _L =8Ω | | 0.6 | | | |
| | | Vcc=3V, R _L =4Ω | | 0.1 | | | |
| Output Power (BTL) | | Vcc=9V, R _L =8Ω | | 4.7 | | W | |
| | | Vcc=6V, R _L =4Ω | | 2.8 | | | |
| Distortion | THD | Stereo, R _L =4Ω, Po=250mW | | 0.3 | 1.5 | % | |
| | | BTL, R _L =4Ω, Po=250mW | | 0.5 | | | |
| Supply Voltage Rejection | RR | Rg=0, Gv=45dB, Vr=150mV, f=100Hz | 40 | 46 | | dB | |
| Input Noise Voltage | V _{NI} | Gv=45dB, BPF=20Hz ~ 20kHz | Rg=0 | | 1.5 | 3 | μV |
| | | | Rg=10kΩ | | 3 | 6 | |
| Cross-Talk | CT | Rg=10kΩ, f=1kHz, R _L =4Ω, Po=1W | 40 | 55 | | dB | |

APPLICATION CIRCUIT

(1) YD2025H TYPE APPLICATION



(2) YD2025H BTL APPLICATION



OUTLINE DRAWING

