

## DUAL AUDIO POWER AMPLIFIER—YD6282

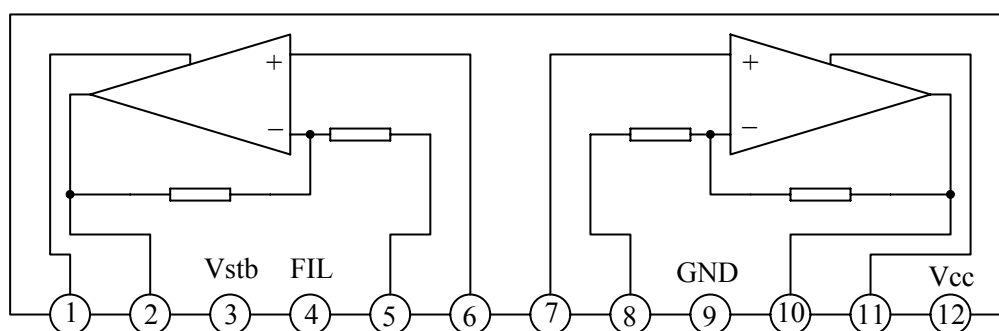
### DESCRIPTION

YD6282 is an audio power IC with built-in two channels developed for portable radio cassette tape recorder. Because of the parts reduction and SIP (Single In line Package), space merit is remarkable. Thermal shut down protection circuit is built in.

### FEATURES

- \*High power:  $P_{out} (1) = 2.5W/CH$  (Typ.) ( $V_{cc}=9V, R_L=4\Omega, f=1kHz, THD=10\%$ )  
 $P_{out} (2) = 4.6W/CH$  (Typ.) ( $V_{cc}=12V, R_L=4\Omega, f=1kHz, THD=10\%$ )
- \*Low popping noise at power ON
- \*Small quiescent current:  $I_{ccq}=19mA$ (Typ.) @ $V_{cc}=9V, V_{in}=0$
- \*Soft clip
- \*Built-in thermal shut down protection circuit
- \*Operation supply voltage range:  $V_{cc}=6V\sim 15V$
- \*Best for supply voltage: 9V or 12V

### BLOCK DIAGRAM



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# YUDA INTEGRATED CIRCUIT

# YD6282

## ABSOLUTE MAXIMUM RATINGS (Tamb=25°C)

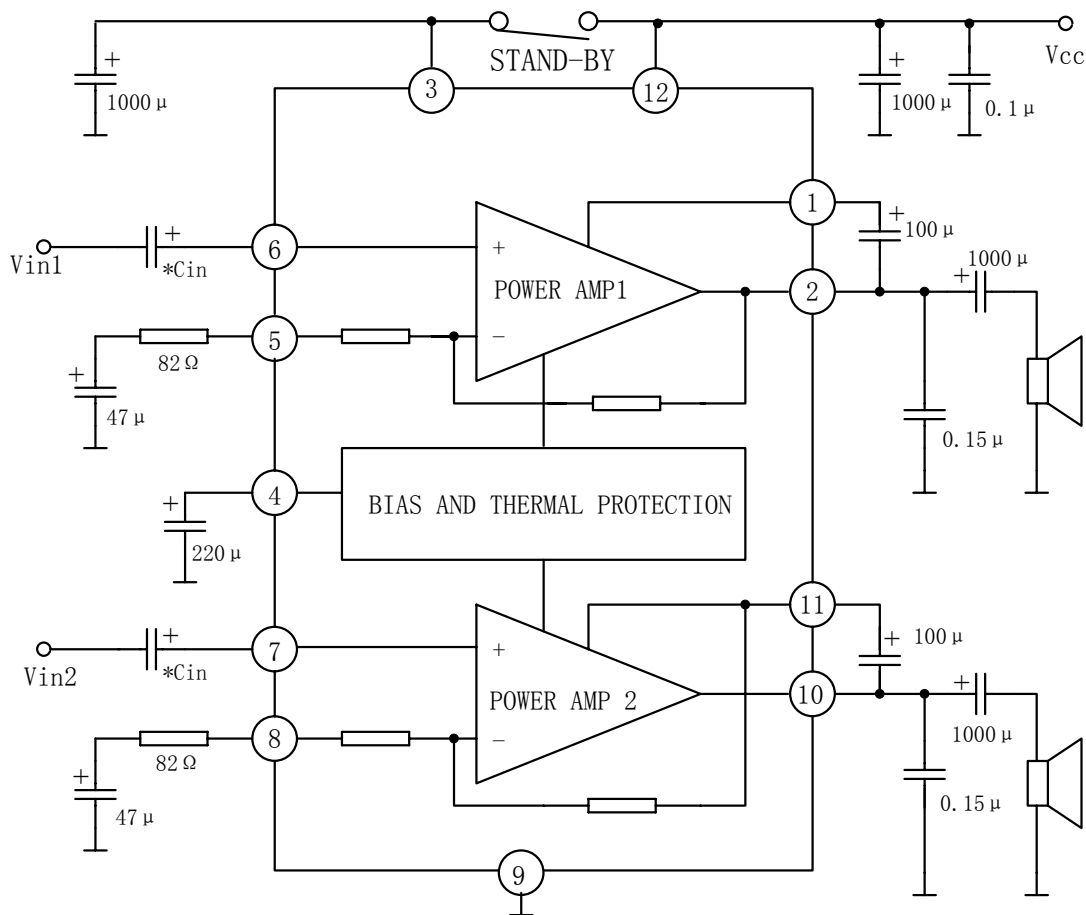
| PARAMETER             |                    | SYMBOL           | VALUE    | UNIT |
|-----------------------|--------------------|------------------|----------|------|
| Supply Voltage        |                    | V <sub>CC</sub>  | 20       | V    |
| Output Peak Current   |                    | I <sub>op</sub>  | 2.5      | A    |
| Power Dissipation     | Infinite Heat Sink | P <sub>D</sub>   | 12.5     | W    |
|                       | No Heat Sink       |                  | 2.0      |      |
| Operating Temperature |                    | T <sub>opr</sub> | -20~+75  | °C   |
| Storage Temperature   |                    | T <sub>stg</sub> | -55~+150 | °C   |

## ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, V<sub>CC</sub>=9V, R<sub>L</sub>=4Ω, R<sub>g</sub>=600Ω, f=1kHz, Tamb=25°C)

| PARAMETER                 | SYMBOL                          | TEST CONDITIONS   | MIN | TYP | MAX | UNIT            |
|---------------------------|---------------------------------|---|-----|-----|-----|-----------------|
| Quiescent Current         | I <sub>ccq</sub>                | V <sub>in</sub> =0  |     | 19  | 45  | mA              |
| Output Power              | P <sub>o</sub>                  | THD=10%,  | 2.0 | 2.5 |     | W               |
|                           |                                 | V <sub>cc</sub> =12V, THD=10%                                       |     | 4.6 |     |                 |
| Total Harmonic Distortion | THD                             | P <sub>o</sub> =1W/CH   |     | 0.2 | 1.0 | %               |
| Voltage Gain              | G <sub>v</sub>                  | R <sub>f</sub> =82Ω V <sub>o</sub> =0dBm                            | 43  | 45  | 47  | dB              |
|                           |                                 | R <sub>f</sub> =0 V <sub>o</sub> =0dBm                              |     | 56  |     |                 |
| Input Resistance          | Z <sub>i</sub>                  |   |     | 30  |     | kΩ              |
| Output Noise Voltage      | V <sub>NO</sub>                 | R <sub>g</sub> =0<br>BW=20Hz~20kHz                                  |     | 0.3 | 1.0 | mV <sub>s</sub> |
| Ripple Rejection Ratio    | RR                              | f=100Hz R <sub>g</sub> =600Ω<br>V <sub>r</sub> =0.2V <sub>rms</sub> |     | 54  |     | dB              |
| Cross Talk                | CT                              | R <sub>g</sub> =600Ω f=1kHz,<br>V <sub>o</sub> =0dBm                |     | 60  |     | dB              |
| Input Offset Voltage      | V <sub>5</sub> , V <sub>7</sub> |   |     | 20  | 60  | mV              |
| Standby Current           | I <sub>SBY</sub>                |   |     | 1   |     | μA              |

APPLICATION CIRCUIT



OUTLINE DRAWING

HSIP12-P-2.54A

Unit : mm

