



## TDA7267

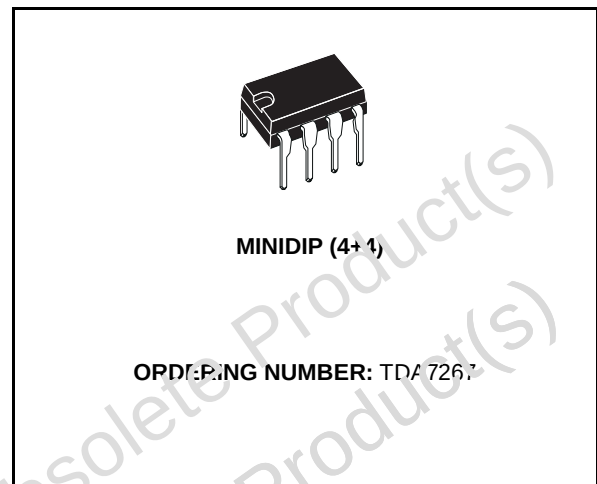
### 2W MONO AMPLIFIER

- CAN DELIVER 2W THD 10% 12V/8Ω
- INTERNAL FIXED GAIN 32dB
- NO FEEDBACK CAPACITOR
- NO BOUCHEROT CELL
- THERMAL PROTECTION
- AC SHORT CIRCUIT PROTECTION
- SVR CAPACITOR FOR BETTER RIPPLE REJECTION
- LOW TURN-ON/OFF POP
- STAND-BY MODE

#### DESCRIPTION

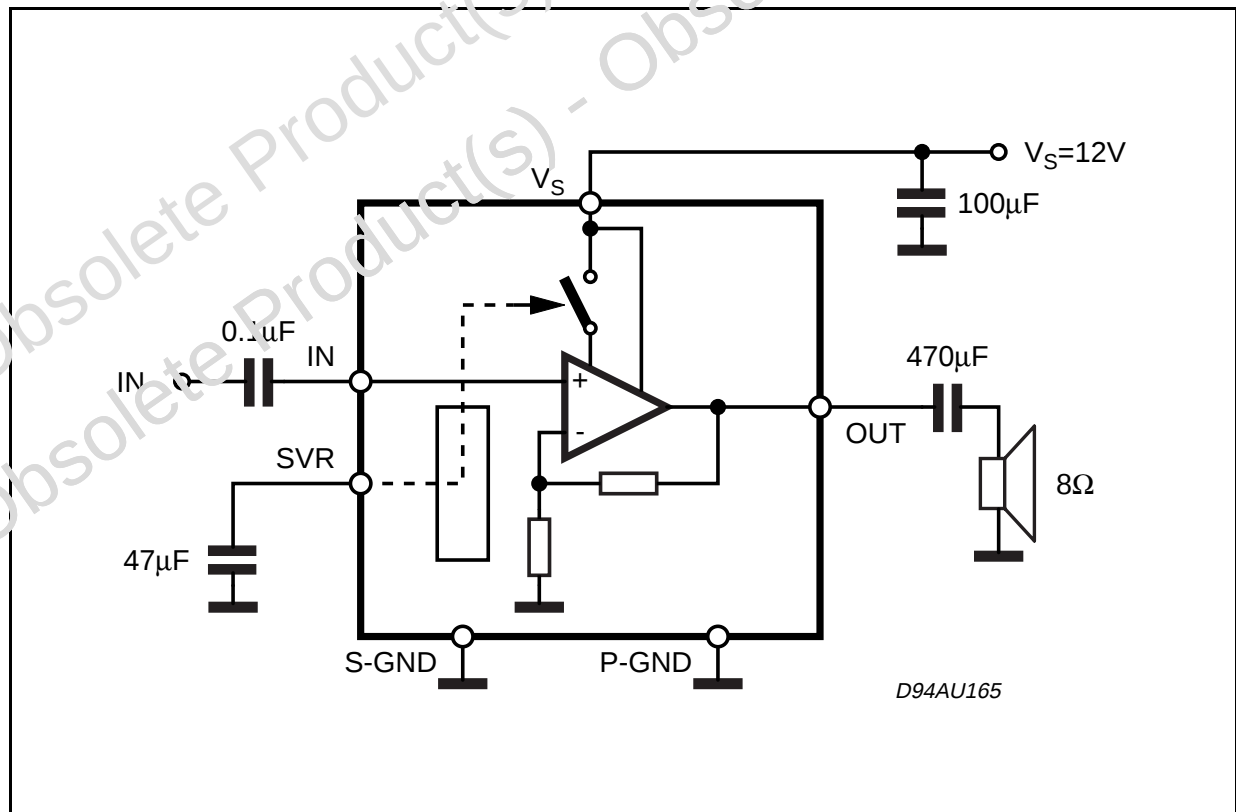
The device TDA7267 is a new technology Mono Audio Amplifier in MINIDIP package specifically designed for TV application.

Thanks to the fully complementary output configura-



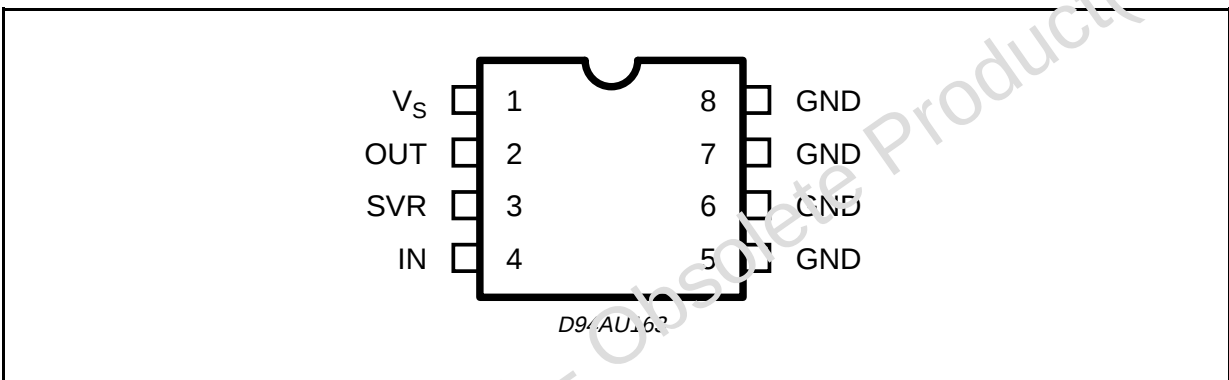
tion the device delivers a rail to rail voltage swing without need of bootstrap capacitors.

#### BLOCK DIAGRAM



**ABSOLUTE MAXIMUM RATINGS**

| Symbol    | Parameter                   | Value      | Unit |
|-----------|-----------------------------|------------|------|
| $V_S$     | Operating Supply Voltage    | 18         | V    |
| $I_O$     | Output Put Peak Current     | 1.5        | A    |
| $T_{op}$  | Operating Temperature Range | 0 to 70    | °C   |
| $T_j$     | Junction Temperature        | 150        | °C   |
| $T_{stg}$ | Storage Temperature Range   | -40 to 125 | °C   |

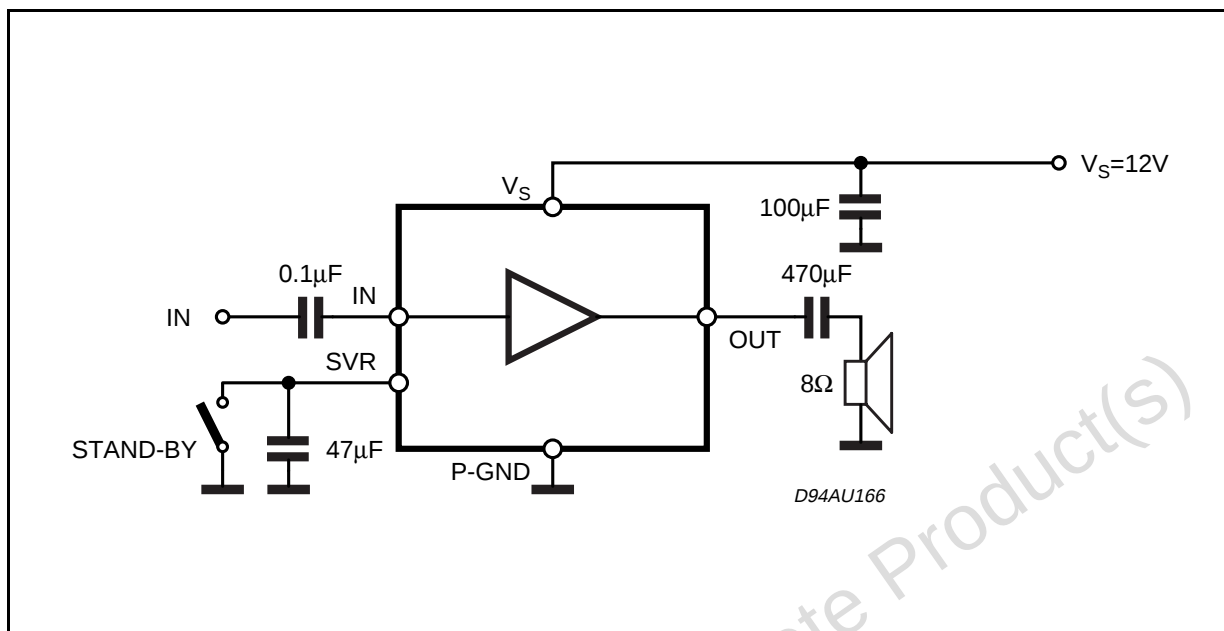
**PIN CONNECTION (Top view)****THERMAL DATA**

| Symbol           | Parameter                                       | Value | Unit |
|------------------|-------------------------------------------------|-------|------|
| $R_{th\ j-amb}$  | Thermal Resistance Junction to ambient (on PCB) | 80    | °C/W |
| $R_{th\ j-case}$ | Thermal Resistance Junction to case             | 15    | °C/W |

**ELECTRICAL CHARACTERISTICS** ( $T_{amb} = 25^{\circ}\text{C}$ ;  $V_S = 12\text{V}$ ;  $R_L = 8\Omega$ ;  $f = 1\text{KHz}$ ; unless otherwise specified.)

| Symbol   | Parameter                | Test Condition                                                 | Min. | Typ. | Max. | Unit          |
|----------|--------------------------|----------------------------------------------------------------|------|------|------|---------------|
| $V_S$    | Supply Voltage Range     |                                                                | 4.5  |      | 18   | V             |
| $I_S$    | Quiescent Current        |                                                                |      | 20   | 30   | mA            |
| $I_{sb}$ | Stand-By Current         | Pin 3 shorted to GND                                           |      |      | 0.3  | mA            |
| $V_O$    | Quiescent Output Voltage |                                                                |      | 6    |      | V             |
| $A_V$    | Voltage Gain             |                                                                |      | 32   |      | dB            |
| $R_{IN}$ | Input Impedance          |                                                                |      | 100  |      | K $\Omega$    |
| $P_O$    | Output Power             | THD = 10%                                                      | 1.8  | 2    |      | W             |
| THD      | Distortion               | $P_O = 1\text{W}$                                              |      |      | 1.0  | %             |
| SVR      | Supply Voltage Rejection | $V_{ripple} = 150\text{mVrms}$ ;<br>$F_{ripple} = 1\text{KHz}$ |      | 50   |      | dB            |
| $E_i$    | Input Noise Voltage      | $R_g = 10\text{K}\Omega$ ; BW = 20Hz to 20KHz                  |      | 1.5  | 5    | $\mu\text{V}$ |
| $V_{sb}$ | Stand-By Enable Voltage  |                                                                |      |      | 1    | V             |

## APPLICATION CIRCUIT



## APPLICATION HINTS:

For 12V supply and 8Ω speaker application, its maximum power dissipation is about 1W.

Assuming that max ambient temperature is 70°C. Required thermal resistance of the device and heat dissipating means must be equal to  $(150 - 70)/1 = 80^{\circ}\text{C/W}$ .

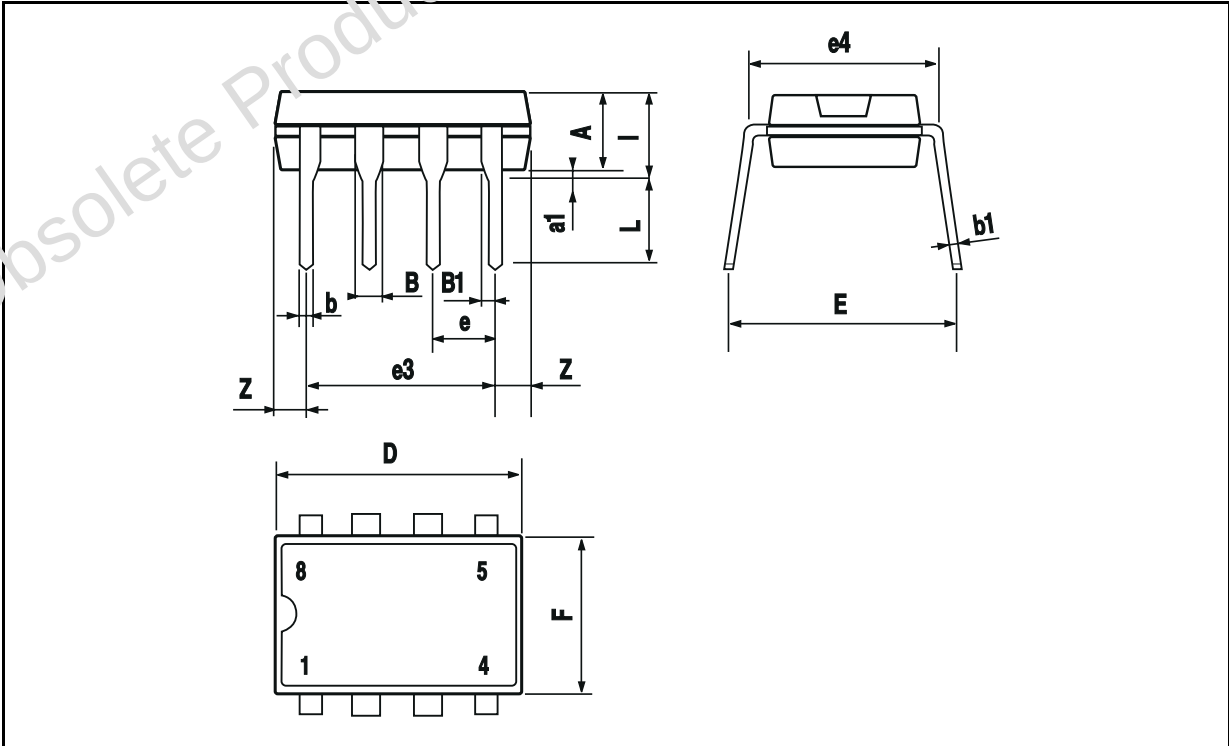
Junction to pin thermal resistance of the package is about 15°C/W. That means external heat sink of about 65°C/W is required.

Cu ground plane of PCB can be used as heat dissipating means.

Stand-By switches must be able to discharge  $C_{SVR}$  current.

MINIDIP PACKAGE MECHANICAL DATA

| DIM. | mm   |      |      | inch  |       |       |
|------|------|------|------|-------|-------|-------|
|      | MIN. | TYP. | MAX. | MIN.  | TYP.  | MAX.  |
| A    |      | 3.3  |      |       | 0.130 |       |
| a1   | 0.7  |      |      | 0.028 |       |       |
| B    | 1.39 |      | 1.65 | 0.055 |       | 0.065 |
| B1   | 0.91 |      | 1.04 | 0.036 |       | 0.041 |
| b    |      | 0.5  |      |       | 0.020 |       |
| b1   | 0.38 |      | 0.5  | 0.015 |       | 0.020 |
| D    |      |      | 9.8  |       |       | 0.386 |
| E    |      | 8.8  |      |       | 0.346 |       |
| e    |      | 2.54 |      |       | 0.100 |       |
| e3   |      | 7.62 |      |       | 0.300 |       |
| e4   |      | 7.62 |      |       | 0.300 |       |
| F    |      |      | 7.1  |       |       | 0.280 |
| I    |      |      | 4.3  |       |       | 0.189 |
| L    |      | 3.3  |      |       | 0.130 |       |
| Z    | 0.44 |      | 1.6  | 0.017 |       | 0.063 |



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