

## 1.Features

- Output current in excess of 1A
- Output voltages of 5V
- Thermal overload protection
- Output transition SOA protection
- 2% output voltage tolerance
- Guaranteed in extended temperature range

## 2.Absolute maximum ratings

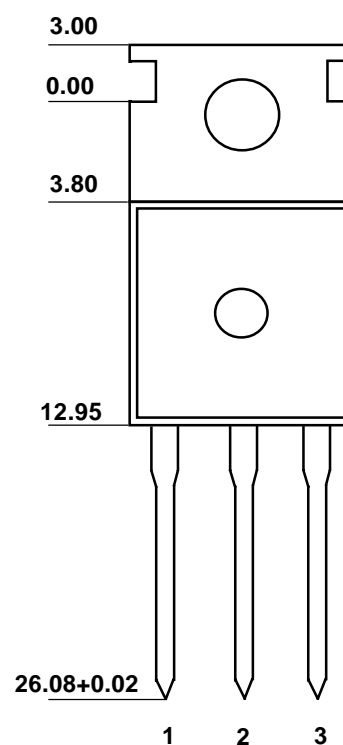
**Table1: Maximum ratings**( $T_A=25\text{ }^{\circ}\text{C}$ )

| Parameter                            | Symbol          | Rating  | Unit                 |
|--------------------------------------|-----------------|---------|----------------------|
| DC input voltage ( $V_o=5\sim 18$ )  | $V_i$           | 35      | V                    |
| Thermal resistance junction-case     | $R_{\theta JC}$ | 5       | $^{\circ}\text{C/W}$ |
| Thermal resistance junction-ambient  | $R_{\theta JA}$ | 65      | $^{\circ}\text{C/W}$ |
| Operating junction temperature range | $T_{OPR}$       | 0~125   | $^{\circ}\text{C}$   |
| Storage temperature range            | $T_{stg}$       | -65~150 | $^{\circ}\text{C}$   |

## 3.Pin information & Package information

**Table2: Pin information & Package information**

| Pin | Description |
|-----|-------------|
| 1   | Input       |
| 2   | GND         |
| 3   | Output      |



## 4. Electrical characteristics

**Table3: Electrical characteristics**( $0^{\circ}\text{C} \leq T_j \leq 125^{\circ}\text{C}$ ,  $I_o = 500\text{mA}$ ,  $V_i = 11\text{V}$ ,  $C_i = 0.33\mu\text{F}$ ,  $C_o = 0.1\mu\text{F}$ )

| Parameter                  | Symbol                  | Condition  | Min  | Typ  | Max  | Unit  |
|----------------------------|-------------------------|--|------|------|------|-------|
| Output voltage             | $V_o$                   | $T_j = 25^{\circ}\text{C}$   | 4.8  | 5.0  | 5.2  | V     |
|                            |                         | $5.0\text{mA} \leq I_o \leq 1.0\text{A}$ , $P_D \leq 15\text{W}$ ,<br>$7.0\text{V} \leq V_i \leq 20\text{V}$ | 4.75 | 5.0  | 5.25 | V     |
| Line regulation            | $\Delta V_o$            | $T_j = 25^{\circ}\text{C}$ , $7.0\text{V} \leq V_i \leq 25\text{V}$  |      | 4.0  | 100  | mV    |
|                            |                         | $T_j = 25^{\circ}\text{C}$ , $9.0\text{V} \leq V_i \leq 13\text{V}$  |      | 1.6  | 50   | mV    |
| Load regulation            | $\Delta V_o$            | $T_j = 25^{\circ}\text{C}$ , $5.0\text{mA} \leq I_o \leq 1.5\text{A}$  |      | 9    | 100  | mV    |
|                            |                         | $T_j = 25^{\circ}\text{C}$ , $250\text{mA} \leq I_o \leq 750\text{mA}$                                       |      | 4    | 50   | mV    |
| Quiescent                  | $I_q$                   | $T_j = 25^{\circ}\text{C}$   |      | 5.0  | 8    | mA    |
| Quiescent current change   | $\Delta I_q$            | $5.0\text{mA} \leq I_o \leq 1.0\text{A}$   |      | 0.03 | 0.5  | mA    |
|                            |                         | $7.0\text{V} \leq V_i \leq 25\text{V}$   |      | 0.3  | 1.3  | mA    |
| Output voltage drift       | $\Delta V_o / \Delta T$ | $I_o = 5\text{mA}$   |      | -0.8 |      | mV/°C |
| Output noise voltage       | $V_n$                   | $T_A = 25^{\circ}\text{C}$ , $10\text{Hz} \leq f \leq 100\text{KHz}$   |      | 42   |      | uV    |
| Supply voltage rejection   | RR                      | $f = 120\text{Hz}$ , $120\text{V} \leq V_i \leq 18\text{V}$  | 62   | 73   |      | dB    |
| Dropout                    | $V_d$                   | $I_o = 1\text{A}$ , $T_j = 25^{\circ}\text{C}$   |      | 2    |      | V     |
| Output resistance          | $R_o$                   | $f = 1\text{KHz}$  |      | 15   |      | mohm  |
| Short circuit current      | $I_{sc}$                | $V_i = 35\text{V}$ , $T_j = 25^{\circ}\text{C}$  |      | 0.23 |      | A     |
| Short circuit peak current | $I_{px}$                | $T_j = 25^{\circ}\text{C}$   |      | 2.2  |      | A     |