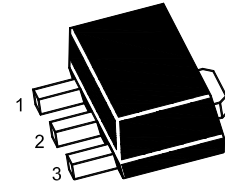


## 3-Terminal Positive Voltage Regulator



1.OUT 2.GND 3.IN  
SOT-89 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

| Parameter                 | Symbol    | Rating            | Unit             |
|---------------------------|-----------|-------------------|------------------|
| Input Voltage             | $V_I$     | 35                | V                |
| Power Dissipation         | $P_{tot}$ | 800 <sup>1)</sup> | mW               |
| Operating Temperature     | $T_{opr}$ | - 20 to + 120     | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{stg}$ | - 55 to +150      | $^\circ\text{C}$ |

<sup>1)</sup> 15 mm X 25 mm X 0.7 mm alumina ceramic board,  $T_a \leq 25\text{ }^\circ\text{C}$

### Electrical Characteristics ( $T_a = 25\text{ }^\circ\text{C}$ )

(Unless otherwise specified,  $0\text{ }^\circ\text{C} \leq T_j \leq 125\text{ }^\circ\text{C}$ ,  $V_I = 19\text{ V}$ ,  $I_o = 40\text{ mA}$ ,  $C_1 = 0.33\text{ }\mu\text{F}$ ,  $C_2 = 0.1\text{ }\mu\text{F}$ )

| Parameter                | Symbol       | Test Condition   | Min. | Typ. | Max. | Unit          |
|--------------------------|--------------|--|------|------|------|---------------|
| Output Voltage           | $V_O$        | $T_j = 25\text{ }^\circ\text{C}$   | 11.5 | 12   | 12.5 | V             |
|                          |              | $14.5\text{ V} \leq V_I \leq 27\text{ V}$ , $1\text{ mA} \leq I_o \leq 40\text{ mA}$             | 11.4 | -    | 12.6 | V             |
|                          |              | $V_I = 19\text{ V}$ , $1\text{ mA} \leq I_o \leq 70\text{ mA}$                                   | 11.4 | -    | 12.6 | V             |
| Line Regulation          | Regline      | $14.5\text{ V} \leq V_I \leq 27\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$                     | -    | -    | 250  | mV            |
|                          |              | $16\text{ V} \leq V_I \leq 27\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$                       | -    | -    | 200  |               |
| Load Regulation          | Regload      | $1\text{ mA} \leq I_o \leq 100\text{ mA}$ , $T_j = 25\text{ }^\circ\text{C}$                     | -    | -    | 100  | mV            |
|                          |              | $1\text{ mA} \leq I_o \leq 40\text{ mA}$ , $T_j = 25\text{ }^\circ\text{C}$                      | -    | -    | 50   |               |
| Quiescent Current        | $I_Q$        | $T_j = 25\text{ }^\circ\text{C}$   | -    | -    | 6    | mA            |
| Quiescent Current Change | $\Delta I_Q$ | $16\text{ V} \leq V_I \leq 27\text{ V}$  | -    | -    | 1.5  | mA            |
|                          |              | $1\text{ mA} \leq I_o \leq 40\text{ mA}$   | -    | -    | 0.1  |               |
| Output Noise Voltage     | $V_N$        | $10\text{ Hz} \leq f \leq 100\text{ KHz}$ , $T_j = 25\text{ }^\circ\text{C}$                     | -    | 80   | -    | $\mu\text{V}$ |
| Ripple Rejection         | RR           | $f = 120\text{ Hz}$ , $15\text{ V} \leq V_I \leq 25\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$ | 37   | -    | -    | dB            |
| Dropout Voltage          | $V_{Drop}$   | $T_j = 25\text{ }^\circ\text{C}$   | -    | 1.7  | -    | V             |

