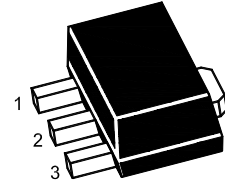


### 3-Terminal Positive Voltage Regulator



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

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

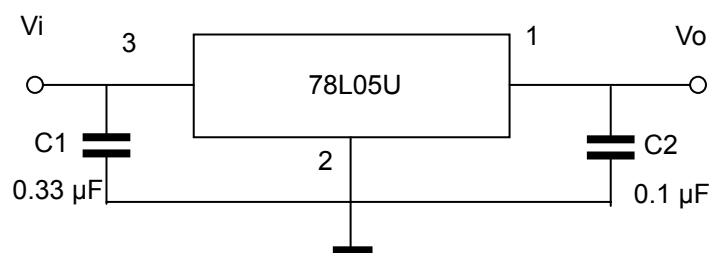
| Parameter                 | Symbol    | Rating            | Unit               |
|---------------------------|-----------|-------------------|--------------------|
| Input Voltage             | $V_I$     | 30                | V                  |
| Power Dissipation         | $P_{tot}$ | 800 <sup>1)</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,  $T_a \leq 25\text{ }^{\circ}\text{C}$

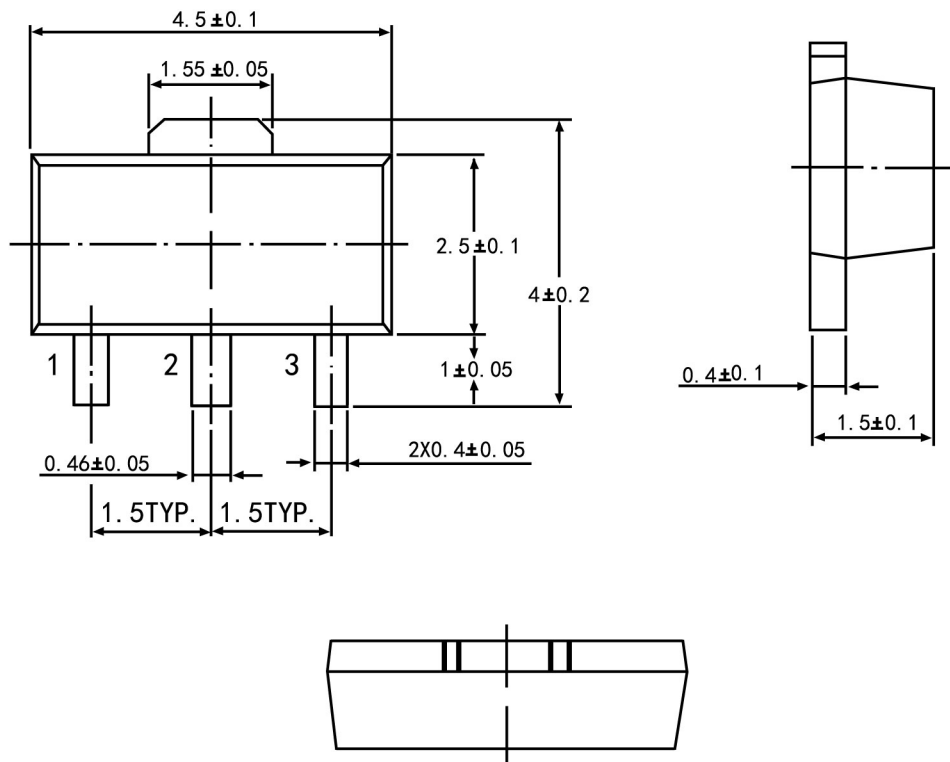
#### Electrical Characteristics ( $T_a = 25\text{ }^{\circ}\text{C}$ )

(Unless otherwise specified,  $0^{\circ}\text{C} \leq T_J \leq 125^{\circ}\text{C}$ ,  $V_I = 10\text{ V}$ ,  $I_O = 40\text{ mA}$ ,  $C_I = 0.33\text{ }\mu\text{F}$ ,  $C_O = 0.1\text{ }\mu\text{F}$ )

| Parameter                | Symbol       | Test Condition                                                                                    | Min. | Typ. | Max. | Unit          |
|--------------------------|--------------|---------------------------------------------------------------------------------------------------|------|------|------|---------------|
| Output Voltage           | $V_O$        | $T_J = 25\text{ }^{\circ}\text{C}$                                                                | 4.8  | 5    | 5.2  | V             |
|                          |              | $7\text{ V} \leq V_I \leq 20\text{ V}$ , $1\text{ mA} \leq I_O \leq 40\text{ mA}$                 | 4.75 | -    | 5.25 | V             |
|                          |              | $V_I = 10\text{ V}$ , $1\text{ mA} \leq I_O \leq 70\text{ mA}$                                    | 4.75 | -    | 5.25 | V             |
| Line Regulation          | Regline      | $7\text{ V} \leq V_I \leq 20\text{ V}$ , $T_J = 25\text{ }^{\circ}\text{C}$                       | -    | -    | 150  | mV            |
|                          |              | $8\text{ V} \leq V_I \leq 20\text{ V}$ , $T_J = 25\text{ }^{\circ}\text{C}$                       | -    | -    | 100  |               |
| Load Regulation          | Regload      | $1\text{ mA} \leq I_O \leq 100\text{ mA}$ , $T_J = 25\text{ }^{\circ}\text{C}$                    | -    | -    | 60   | mV            |
|                          |              | $1\text{ mA} \leq I_O \leq 40\text{ mA}$ , $T_J = 25\text{ }^{\circ}\text{C}$                     | -    | -    | 30   |               |
| Quiescent Current        | $I_Q$        | $T_J = 25\text{ }^{\circ}\text{C}$                                                                | -    | -    | 5.5  | mA            |
| Quiescent Current Change | $\Delta I_Q$ | $8\text{ V} \leq V_I \leq 20\text{ V}$                                                            | -    | -    | 1.5  | mA            |
|                          |              | $1\text{ mA} \leq I_O \leq 40\text{ mA}$                                                          | -    | -    | 0.1  |               |
| Output Noise Voltage     | $V_N$        | $10\text{ Hz} \leq f \leq 100\text{ KHz}$ , $T_J = 25\text{ }^{\circ}\text{C}$                    | -    | 40   | -    | $\mu\text{V}$ |
| Ripple Rejection         | RR           | $f = 120\text{ Hz}$ , $8\text{ V} \leq V_I \leq 18\text{ V}$ , $T_J = 25\text{ }^{\circ}\text{C}$ | 41   | -    | -    | dB            |
| Dropout Voltage          | $V_{Drop}$   | $T_J = 25\text{ }^{\circ}\text{C}$                                                                | -    | 1.7  | -    | V             |



### SOT-89 PACKAGE OUTLINE



| Symbol               | Dimension in Millimeters |      |
|----------------------|--------------------------|------|
|                      | Min                      | Max  |
| A                    | 1.40                     | 1.60 |
| B                    | 0.44                     | 0.62 |
| B1                   | 0.35                     | 0.54 |
| C                    | 0.35                     | 0.44 |
| D                    | 4.40                     | 4.60 |
| D1                   | 1.62                     | 1.83 |
| E                    | 2.29                     | 2.60 |
| e                    | 1.50 Typ                 |      |
| H                    | 3.94                     | 4.25 |
| H1                   | 2.63                     | 2.93 |
| L                    | 0.89                     | 1.20 |
| All Dimensions In mm |                          |      |