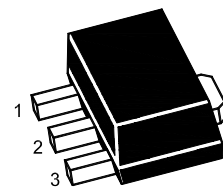


### 3-Terminal Positive Voltage Regulator

#### FEATURES

- Maximum output current  
 $I_{OM}$ : 0.2A
- Output voltage  
 $V_O$ : 5V
- Continuous total dissipation  
 $P_D$ : 0.6 W ( $T_a = 25^\circ\text{C}$ )



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

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

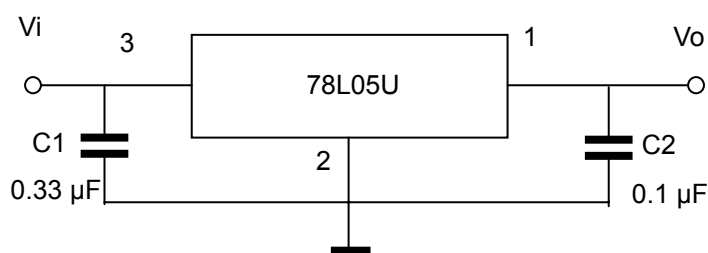
| Parameter                 | Symbol    | Rating            | Unit             |
|---------------------------|-----------|-------------------|------------------|
| Input Voltage             | $V_I$     | 35                | V                |
| Power Dissipation         | $P_{tot}$ | 600 <sup>1)</sup> | mW               |
| Operating Temperature     | $T_{opr}$ | - 40 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,  $T_a \leq 25^\circ\text{C}$

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

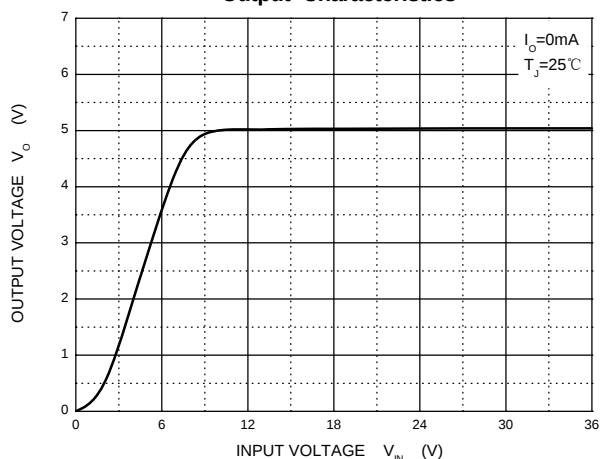
(Unless otherwise specified,  $0^\circ\text{C} \leq T_J \leq 125^\circ\text{C}$ ,  $V_I = 10\text{ V}$ ,  $I_O = 40\text{ mA}$ ,  $C_I = 0.33\text{ }\mu\text{F}$ ,  $C_O = 0.1\text{ }\mu\text{F}$ )

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

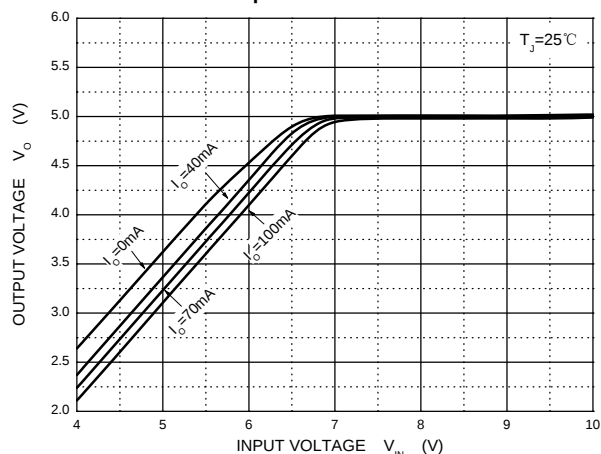


## Typical Characteristics

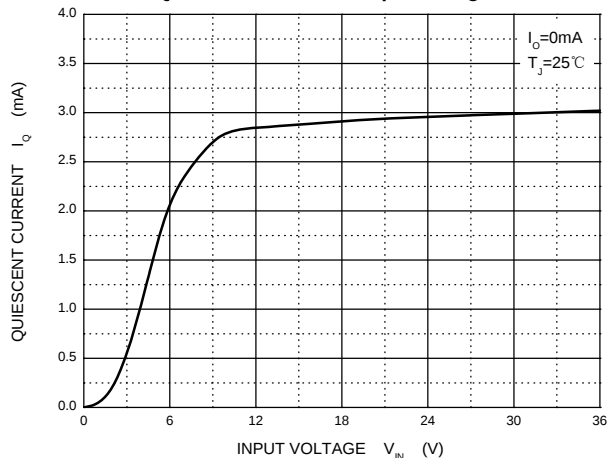
Output Characteristics



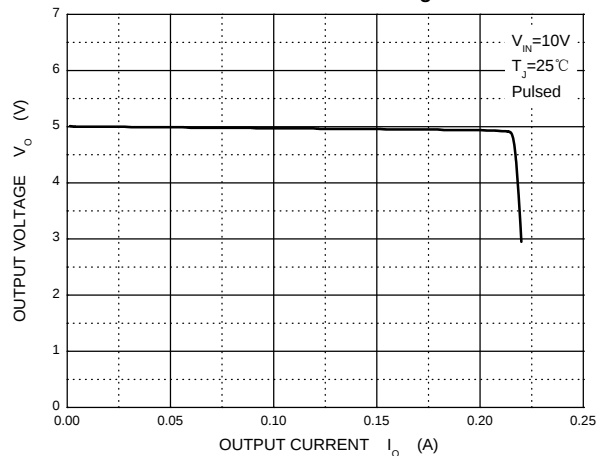
Dropout Characteristics



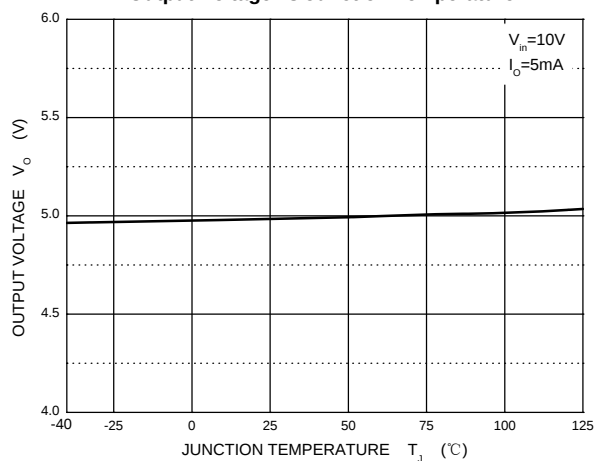
Quiescent Current vs Input Voltage



Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



Power Derating Curve

