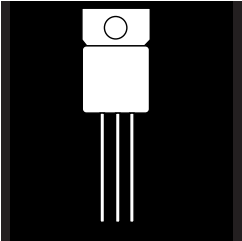


(COTS) COMMERCIAL OFF-THE-SHELF 3.0 AMP POSITIVE  
ADJUSTABLE VOLTAGE REGULATOR IN TO-257 PACKAGE



Three Terminal, Adjustable Voltage, 3.0 Amp  
Precision Positive Regulator In Hermetic  
JEDEC TO-257AA Package

FEATURES

- Isolated Hermetic Package, JEDEC TO-257AA Outline
- Reference Voltages Set To  $\pm 2\%$
- Built-In Thermal Overload Protection
- Short Circuit Current Limiting

DESCRIPTION

These three terminal positive regulators are supplied in a hermetically sealed isolated, metal TO-257 package. All protective features are designed into the circuit including thermal shutdown, current limiting and safe-area control. With heat sinking, they can deliver over 3.0 amps of output current. These units feature 2% initial voltage tolerance, 0.35% load regulation and .01% line regulation.

ABSOLUTE MAXIMUM RATINGS @ 25°C

Input - Output Voltage Differential ..... +35 V  
Operating Junction Temperature Range ..... - 55°C to + 150°C  
Storage Temperature Range ..... - 65°C to + 150°C

Typical Power/Thermal Characteristics:

Rated Power @ 25°C  
     $T_C$  ..... 25 W  
     $T_A$  ..... 3 W  
Thermal Resistance ..... 4.2°C/W  
 $\theta_{JA}$  ..... 50°C/W

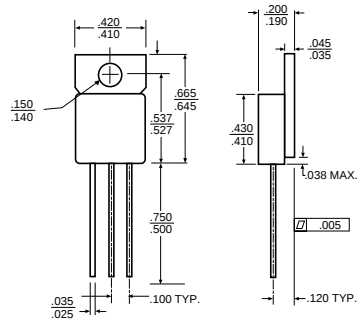
ELECTRICAL CHARACTERISTICS -55°C T<sub>A</sub> 125°C (Note 1) unless otherwise specified

| Test                         | Symbol            | Conditions                                                                                           | Limits |      | Unit |
|------------------------------|-------------------|------------------------------------------------------------------------------------------------------|--------|------|------|
|                              |                   |                                                                                                      | Min.   | Max. |      |
| Reference Voltage            | V <sub>REF</sub>  | I <sub>OUT</sub> = 10mA<br>T <sub>A</sub> = 25°C                                                     | 1.20   | 1.30 | V    |
|                              |                   | 3.0V (V <sub>N</sub> - V <sub>OUT</sub> ) 35V, P 30W<br>10mA I <sub>OUT</sub> 3.0A (Note 2)          | 1.20   | 1.30 | V    |
| Line Regulation<br>(Note 2)  | R <sub>LINE</sub> | 3.0V (V <sub>N</sub> - V <sub>OUT</sub> ) 35V,<br>I <sub>OUT</sub> = 10mA, T <sub>J</sub> = 25°C     |        | 0.01 | %/V  |
|                              |                   | 3.0V (V <sub>N</sub> - V <sub>OUT</sub> ) 35V,<br>I <sub>OUT</sub> = 10mA                            |        | 0.05 | %/V  |
| Load Regulation<br>(Note 2)  | R <sub>LOAD</sub> | 10mA I <sub>OUT</sub> 3.0A,<br>V <sub>OUT</sub> 5.0A, T <sub>J</sub> = 25°C                          |        | 17.5 | m V  |
|                              |                   | 10mA I <sub>OUT</sub> 3.0A,<br>V <sub>OUT</sub> 5.0A                                                 | 50     | m V  |      |
|                              |                   | 10mA I <sub>OUT</sub> 3.0A,<br>V <sub>OUT</sub> 5.0A, T <sub>J</sub> = 25°C                          | 0.35   | %    |      |
|                              |                   | 10mA I <sub>OUT</sub> 3.0A,<br>V <sub>OUT</sub> 5.0A                                                 | 1.0    | %    |      |
| Thermal Regulation           |                   | 20ms pulse, T <sub>A</sub> =25°C                                                                     |        | 0.01 | %/W  |
| Ripple Rejection<br>(Note 3) | R <sub>N</sub>    | V <sub>OUT</sub> = 10V, f = 120Hz<br>C <sub>ADJ</sub> = 10μF                                         | 66     |      | dB   |
| Adjust Pin Current           | I <sub>Adj</sub>  |                                                                                                      |        | 100  | μA   |
| Adjust Pin<br>Current Change | I <sub>Adj</sub>  | 10mA I <sub>OUT</sub> 3.0A, I <sub>OUT</sub> = 10mA<br>3.0V (V <sub>N</sub> - V <sub>OUT</sub> ) 35V | 5.0    | μA   |      |
| Minimum Load Current         | I <sub>MIN</sub>  | (V <sub>N</sub> - V <sub>OUT</sub> ) = 35V                                                           | 5.0    | m A  |      |
| Current Limit                | I <sub>L</sub>    | (V <sub>N</sub> - V <sub>OUT</sub> ) 10V                                                             | 3.0    |      | A    |
|                              |                   | (V <sub>N</sub> - V <sub>OUT</sub> ) = 30V                                                           | 0.3    |      | A    |

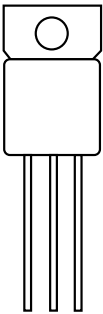
Notes:

- 1. Unless otherwise specified, these specifications apply for (V<sub>N</sub> -V<sub>OUT</sub>) = 5.0V and I<sub>OUT</sub> = 1.5A.
- 2. Regulation is measured at a constant junction temperature using a pulse technique. Changes in output voltage due to heating effects are covered under the specification for thermal regulation.
- 3. Guaranteed if not tested to the limits specified.

MECHANICAL OUTLINE  
TO-257AA



PIN CONNECTION



Front View  
Pin 1: Adjust  
Pin 2: Vout  
Pin 3: Vin  
Tab: Isolated

1 2 3