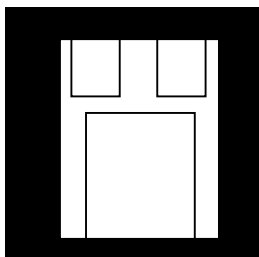


HERMETIC SURFACE MOUNT ADJUSTABLE POSITIVE VOLTAGE REGULATOR



Three Terminal, Adjustable Voltage, 3.0 Amp Precision Positive Regulator In Hermetic Surface Mount Package

FEATURES

- Hermetic Surface Mount Package
- Reference Voltage Set To $\pm 2\%$
- Built-In Thermal Overload Protection
- Short Circuit Current Limiting
- Product Is Available Hi-Rel Screened
- Electrically Similar To Industry Standard Type LM150A

DESCRIPTION

These three terminal positive regulators are supplied in a hermetically sealed surface mount 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, with 0.3% load regulation and .01% line regulation.

ABSOLUTE MAXIMUM RATINGS

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

Typical Power/Thermal Characteristics:

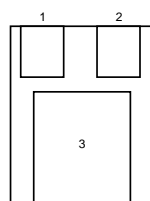
Rated Power @ 25°C

| | |
|-------|-----|
| T_C | 25W |
| T_A | 3W |

Thermal Resistance:

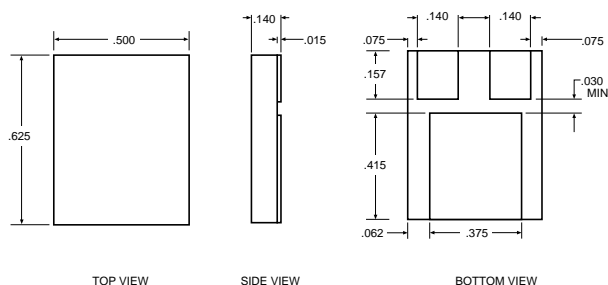
| | |
|----------------------------------|---------|
| θ_{JC} | 3.5°C/W |
| θ_{JA} | 42°C/W |
| Lead Temperature at Case (5 sec) | 225°C |

PIN CONNECTION



Pin 1: Adjust
Pin 2: V_{IN}
Pin 3: V_{OUT}

MECHANICAL OUTLINE



3.5

ELECTRICAL CHARACTERISTICS -55°C T_A 125°C (Note 1) unless otherwise specified

| Test | Symbol | Conditions | Limits | | Unit |
|------------------------------|---------------------------|---|--------|------|---------|
| | | | Min. | Max. | |
| Reference Voltage | V_{REF} | $I_{OUT} = 10mA$ $T_A = 25^\circ C$ | 1.20 | 1.30 | V |
| | | 3.0V ($V_{IN} - V_{OUT}$) 35V, P 30W 10mA I_{OUT} 3.0A (Note 2) | 1.20 | 1.30 | V |
| Line Regulation (Note 2) | $\frac{V_{OUT}}{V_{IN}}$ | 3.0V ($V_{IN} - V_{OUT}$) 35V, $I_{OUT} = 10mA$, $T_J = 25^\circ C$ | | 0.01 | %/V |
| | | 3.0V ($V_{IN} - V_{OUT}$) 35V, $I_{OUT} = 10mA$ | | 0.05 | % |
| Load Regulation (Note 2) | $\frac{V_{OUT}}{I_{OUT}}$ | 10mA I_{OUT} 3.0A, V_{OUT} 5.0A, $T_J = 25^\circ C$ | | 17.5 | mV |
| | | 10mA I_{OUT} 3.0A, V_{OUT} 5.0A | | 50 | mV |
| | | 10mA I_{OUT} 3.0A, V_{OUT} 5.0A, $T_J = 25^\circ C$ | | 0.35 | % |
| | | 10mA I_{OUT} 3.0A, V_{OUT} 5.0A | | 1.0 | % |
| Thermal Regulation | | 20ms pulse, $T_A = 25^\circ C$ | | 0.01 | %/W |
| Ripple Rejection (Note 3) | $\frac{V_{IN}}{V_{REF}}$ | $V_{OUT} = 10V$, $f = 120Hz$ $C_{ADJ} = 10\mu F$ | 66 | | dB |
| Adjust Pin Current | I_{Adj} | | | 100 | μA |
| Adjust Pin Current Change | I_{Adj} | 10mA I_{OUT} 3.0A, $I_{OUT} = 10mA$ 3.0V ($V_{IN} - V_{OUT}$) 35V | | 5.0 | μA |
| Minimum Load Current | I_{MIN} | $(V_{IN} - V_{OUT}) = 35V$ | | 5.0 | mA |
| Current Limit | I_{CL} | $(V_{IN} - V_{OUT}) = 10V$ | 3.0 | | A |
| | | $(V_{IN} - V_{OUT}) = 30V$ | 0.3 | | A |

Notes:

1. Unless otherwise specified, these specifications apply for $(V_{IN} - V_{OUT}) = 5.0V$ and $I_{OUT} = 1.5A$. Although power dissipation is internally limited, these characteristics are applicable for power dissipation up to 30W.
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.