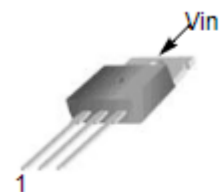


## FEATURES

- Output current in excess of 1.5A
- Output voltage of -12V
- Internal thermal overload protection
- Output transition Safe-Area compensation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## TO-220 (Dual Gauge)



1. GND 2. Input 3. Output

## ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}\text{C}$ )

| SYMBOL    | PARAMETER                      | RATING             | UNIT               |
|-----------|--------------------------------|--------------------|--------------------|
| $V_i$     | DC input voltage               | -35                | V                  |
| $I_o$     | Output current                 | internally limited |                    |
| $P_{tot}$ | Power dissipation              | internally limited |                    |
| $T_{OP}$  | Operating junction temperature | 0~150              | $^{\circ}\text{C}$ |
| $T_{stg}$ | Storage temperature            | -55~150            | $^{\circ}\text{C}$ |

## THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                               | MAX | UNIT                        |
|---------------|-----------------------------------------|-----|-----------------------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case    | 3   | $^{\circ}\text{C}/\text{W}$ |
| $R_{th\ j-a}$ | Thermal Resistance, Junction to Ambient | 50  | $^{\circ}\text{C}/\text{W}$ |

# • ELECTRICAL CHARACTERISTICS

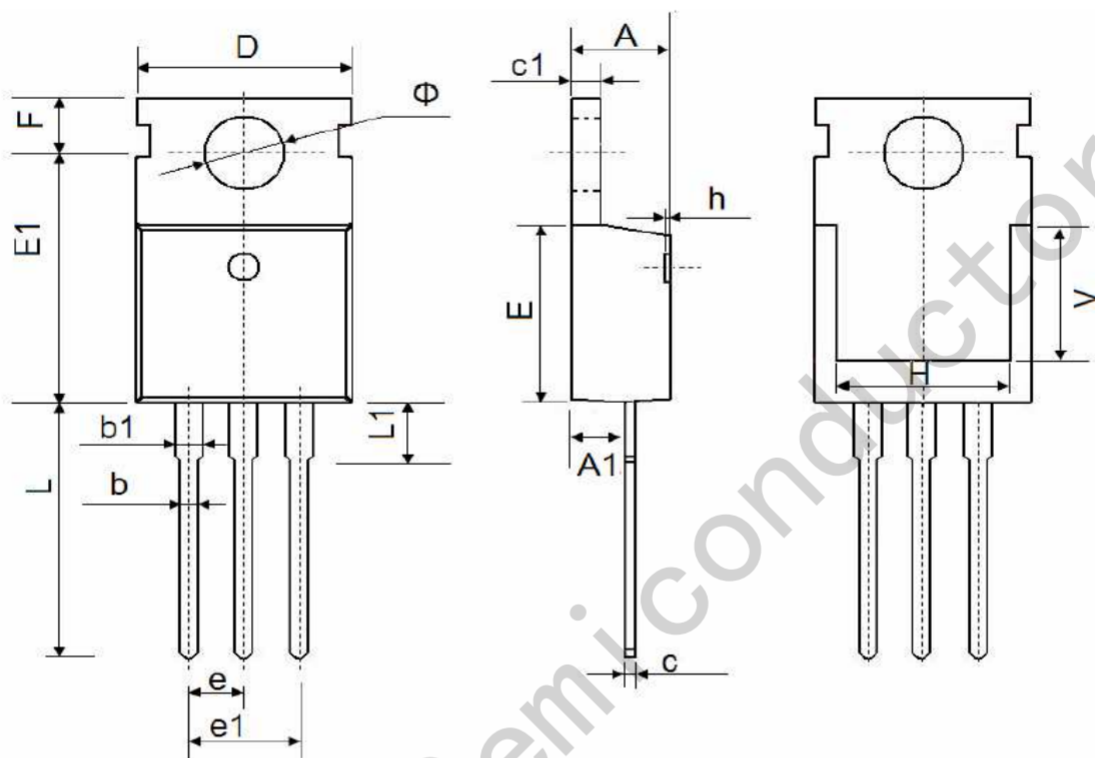
$T_j=25^{\circ}\text{C}$  ( $V_i=-15\text{V}$ ,  $I_o=0.5\text{A}$ ,  $C_i=2.2\mu\text{F}$ ,  $C_o=1\mu\text{F}$  unless otherwise specified)

| SYMBOL        | PARAMETER                | CONDITIONS                                                                                                                     | MIN   | TYP  | MAX        | UNIT |
|---------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------|------|------------|------|
| $V_o$         | Output Voltage           | $V_{in}=-19\text{V}$ ; $I_o=0.5\text{A}$                                                                                       | -8.64 | -9.0 | -9.36      | V    |
| $V_o$         | Output Voltage           | $V_{in}=-15.5\text{to}-27\text{V}$ ; $I_o=5\text{mA to }1\text{A}$ ;<br>$P_o\leq 15\text{W}$                                   | -8.55 |      | -9.45      | V    |
| $\Delta V_v$  | Line Regulation          | $-14.5\text{V}\leq V_{in}\leq -30\text{V}$ ; $I_o=0.5\text{A}$<br>$-16\text{V}\leq V_{in}\leq -22\text{V}$ ; $I_o=0.5\text{A}$ |       |      | 240<br>120 | mV   |
| $\Delta V_i$  | Load Regulation          | $5.0\text{mA}\leq I_o\leq 1.5\text{A}$ ;<br>$250\text{mA}\leq I_o\leq 750\text{mA}$ ;                                          |       |      | 240<br>120 | mV   |
| $I_d$         | Quiescent Current        | $V_{in}=-19\text{V}$ ; $I_o=0.5\text{A}$                                                                                       |       |      | 3          | mA   |
| $\Delta_{d1}$ | Quiescent Current Change | $5.0\text{mA}\leq I_o\leq 1.0\text{A}$ ; $V_{in}=-19\text{V}$                                                                  |       |      | 0.5        | mA   |
| $\Delta_{d2}$ | Quiescent Current Change | $-15\text{V}\leq V_{in}\leq -30\text{V}$ ; $I_o=0.5\text{A}$                                                                   |       |      | 1          | mA   |

## Package Dimensions

TO-220-3L

Dimensions in mm



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min.                      | Max.  | Min.                 | Max.  |
| A      | 4.30                      | 4.70  | 0.169                | 0.185 |
| A1     | 2.25                      | 2.55  | 0.089                | 0.100 |
| b      | 0.71                      | 0.91  | 0.028                | 0.036 |
| b1     | 1.17                      | 1.37  | 0.046                | 0.054 |
| c      | 0.33                      | 0.65  | 0.013                | 0.026 |
| c1     | 1.20                      | 1.40  | 0.047                | 0.055 |
| D      | 9.91                      | 10.25 | 0.390                | 0.404 |
| E      | 8.95                      | 9.75  | 0.352                | 0.384 |
| E1     | 12.65                     | 12.95 | 0.498                | 0.510 |
| e      | 2.54 BSC.                 |       | 0.100 BSC.           |       |
| e1     | 4.98                      | 5.18  | 0.196                | 0.204 |
| F      | 2.65                      | 2.95  | 0.104                | 0.116 |
| H      | 7.90                      | 8.10  | 0.311                | 0.319 |
| h      | 0.00                      | 0.30  | 0.000                | 0.012 |
| L      | 12.90                     | 13.40 | 0.508                | 0.528 |
| L1     | 2.85                      | 3.25  | 0.112                | 0.128 |
| V      | 7.500 Ref.                |       | 0.295 Ref.           |       |
| Φ      | 3.400                     | 3.800 | 0.134                | 0.150 |