

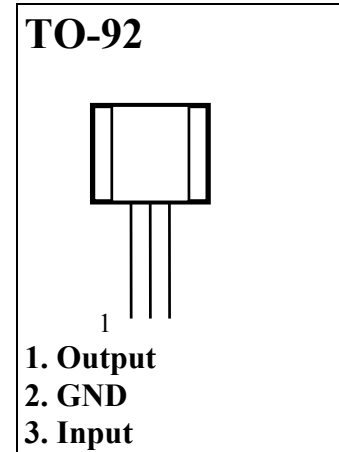
# 78L15 A • THREE-TERMINAL POSITIVE VOLTAGE REGULATOR IC

## FEATURES:

- OUTPUT CURRENT IN EXCESS OF 100mA;
- NO EXTERNAL COMPONENTS REQUIRED;
- INTERNAL SHORT CIRCUIT CURRENT LIMITING;
- INTERNAL THERMAL OVERLOAD PROTECTION;
- OUTPUT TRIMMET TO  $\pm 5\%$  TOLERANCE;

## ABSOLUTE MAXIMUM RATINGS (Ta= 25° C)

| Characteristic       | Symbol          | Norm | Unit |
|----------------------|-----------------|------|------|
| Input Voltage        | V <sub>in</sub> | V    | 35   |
| Junction Temperature | T <sub>j</sub>  | °C   | 150  |



## ELECTRICAL CHARACTERISTICS

(V<sub>in</sub>=23V, I<sub>o</sub>=40mA, C<sub>i</sub>=0.33mkF, C<sub>o</sub>=0.1mkF, T<sub>j</sub>=0+125°C, unless otherwise noted.)

| Characteristic  | Symbo<br>l                      | Norm           |     |                | Unit |
|---|---------------------------------|----------------|-----|----------------|------|
|   |                                 | Min            | TYP | Max            |      |
| Output Voltage(T <sub>j</sub> =25°C)  | V <sub>o</sub>                  | 14,4           |     | 15,6           | V    |
| Output Voltage<br>1.0mA ≤ I <sub>o</sub> ≤ 40mA, 17,5 V ≤ V <sub>in</sub> ≤ 30V<br>1.0mA ≤ I <sub>o</sub> ≤ 70mA, V <sub>in</sub> = 23V | V <sub>o</sub>                  | 14,25<br>14,25 |     | 15,75<br>15,75 | V    |
| Line Regulation (T <sub>j</sub> = +25°C, I <sub>o</sub> = 40mA )<br>17,5 V ≤ V <sub>in</sub> ≤ 30 V<br>20 V ≤ V <sub>in</sub> ≤ 30 V    | ΔV <sub>v</sub>                 |                |     | 300<br>250     | mV   |
| Load Regulation(T <sub>j</sub> = +25°C)<br>1.0mA ≤ I <sub>o</sub> ≤ 0.1A<br>1.0mA ≤ I <sub>o</sub> ≤ 40mA                               | ΔV <sub>i</sub>                 |                |     | 150<br>75      | mV   |
| Quiescent Current T <sub>j</sub> = +25°C  | I <sub>b</sub>                  |                |     | 6.5            | mA   |
| T <sub>j</sub> = +125°C   | I <sub>b</sub>                  |                |     | 6.0            | mA   |
| Quiescent Current Change<br>20 V ≤ V <sub>in</sub> ≤ 30 V<br>1.0mA ≤ I <sub>o</sub> ≤ 40m A   | ΔI <sub>b</sub>                 |                |     | 1.5<br>0.1     | mA   |
| Dropout Voltage (I <sub>o</sub> = 40mA, T <sub>j</sub> = +25°C)   | V <sub>i</sub> - V <sub>o</sub> |                | 1,7 |                | V    |