

Three-terminal positive voltage regulator

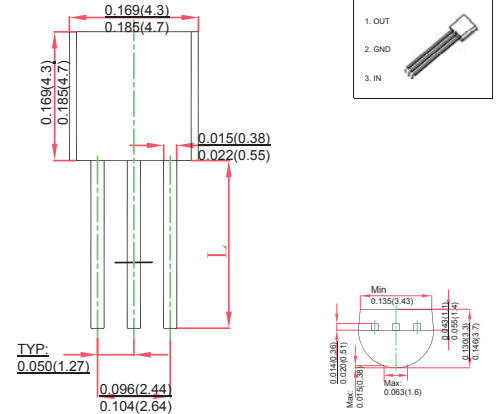
FEATURES

- Maximum output current IOM: 0.1A
- Output voltage VO: -15V
- Continuous total dissipation
PD: 0.625 W (T a= 25 °C)

MECHANICAL DATA

- Case: TO-92 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

TO-92



ABSOLUTE MAXIMUM RATINGS

(Operating temperature range applies unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|---|-----------------|----------|------|
| Input Voltage | V_i | -35 | V |
| Thermal Resistance from Junction to Ambient | $R_{\theta JA}$ | 200 | °C/W |
| Operating Junction Temperature Range | T_{OPR} | 0~+150 | °C |
| Storage Temperature Range | T_{STG} | -65~+150 | °C |

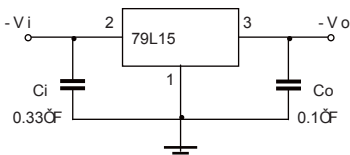
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE

($V_i = -23V, I_o = 40mA, C_i = 0.33 \mu F, C_o = 0.1 \mu F$, unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit | |
|--------------------------|--------------|--|---------|--------|-------|-------------|----|
| Output voltage | V_o | 25°C | -14.4 | -15 | -15.6 | V | |
| | | -17.5V $\leq V_i \leq$ -30V, $I_o = 1mA \sim 40mA$ | 0-125°C | -14.25 | -15 | -15.75 | V |
| | | $I_o = 1mA \sim 70mA$ | 0-125°C | -14.25 | -15 | -15.75 | V |
| Load Regulation | ΔV_o | $I_o = 1mA \sim 100mA, V_i = -23V$ | 25°C | 25 | 150 | mV | |
| | | $I_o = 1mA \sim 40mA, V_i = -23V$ | 25°C | 15 | 75 | mV | |
| Line regulation | ΔV_o | -17.5V $\leq V_i \leq$ -30V, $I_o = 40mA$ | 25°C | 65 | 300 | mV | |
| | | -20V $\leq V_i \leq$ -30V, $I_o = 40mA$ | 25°C | 50 | 250 | mV | |
| Quiescent Current | I_q | 25°C | | | 6.5 | mA | |
| Quiescent Current Change | ΔI_q | -20V $\leq V_i \leq$ -30V, $I_o = 40mA$ | 0-125°C | | | 1.5 | mA |
| | | 1mA $\leq I_o \leq$ 40mA | 0-125°C | | | 0.1 | mA |
| Output Noise Voltage | V_N | 10Hz $\leq f \leq$ 100KHz | 25°C | 90 | | $\mu V/V_o$ | |
| Ripple Rejection | RR | -18.5V $\leq V_i \leq$ -28.5V, $f = 120Hz$ | 0-125°C | 34 | 39 | dB | |
| Dropout Voltage | V_d | 25°C | | 1.7 | | V | |

* Pulse test.

TYPICAL APPLICATION

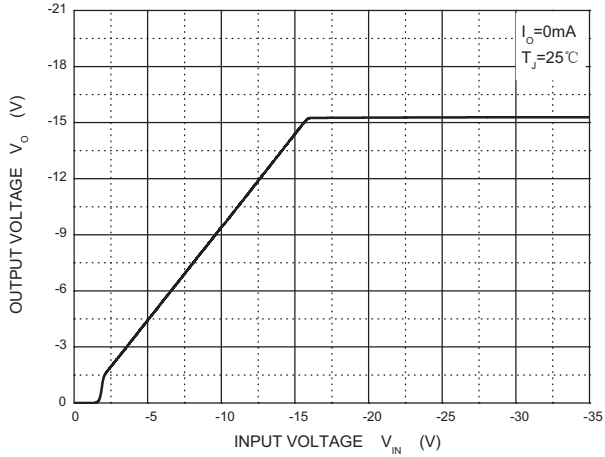


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

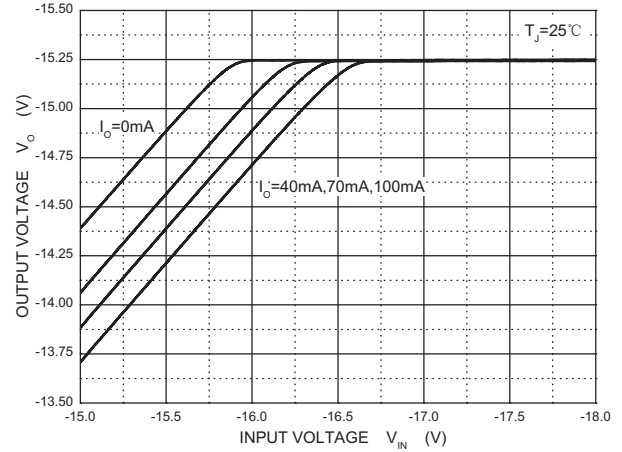
RATINGS AND CHARACTERISTIC CURVES

TYPICAL APPLICATION

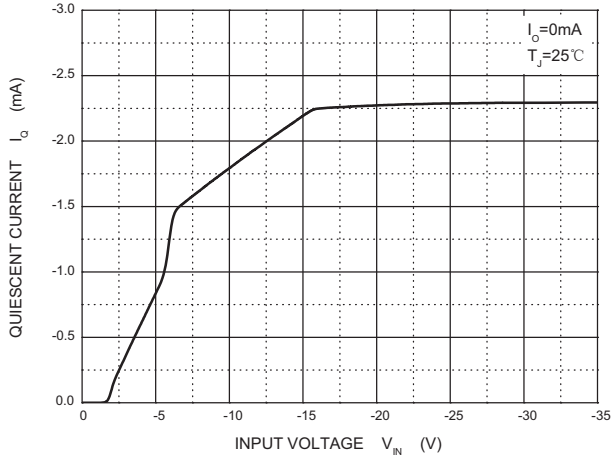
Output Characteristics



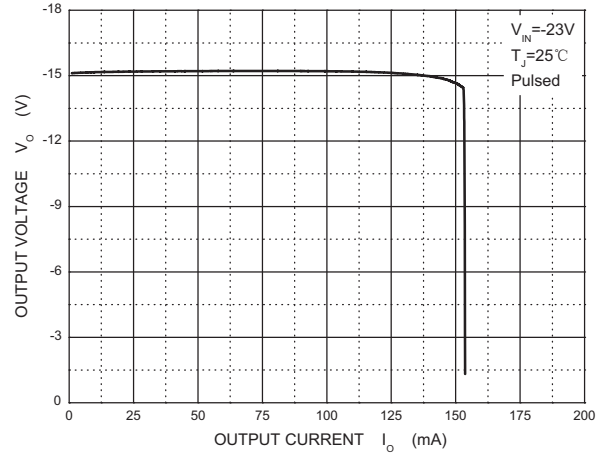
Dropout Characteristics



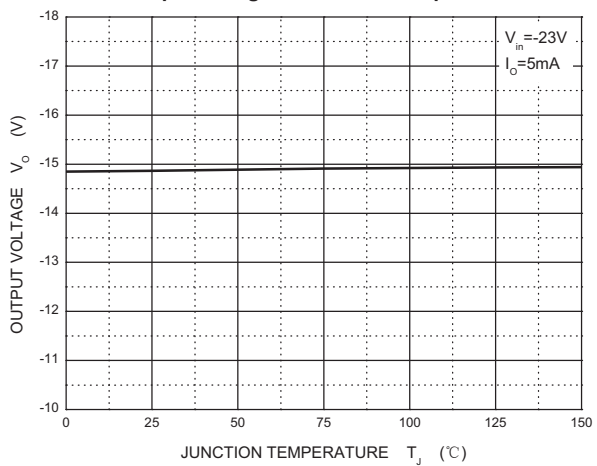
Quiescent Current vs Input Voltage



Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



Power Derating Curve

