

## Three-terminal positive voltage regulator

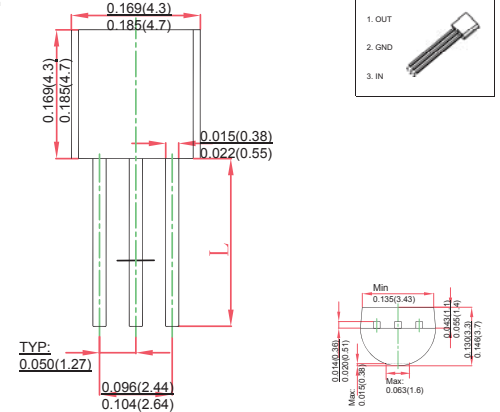
### FEATURES

- Maximum output current IOM: 0.1A
- Output voltage  $V_O$ : -15V
- Continuous total dissipation  
 $P_D$ : 0.625 W (  $T_a = 25^\circ\text{C}$  )

### 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	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_{OPR}$	0~+150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65~+150	$^\circ\text{C}$

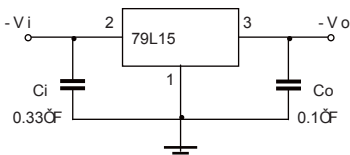
### ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE

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

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

\* Pulse test.

### TYPICAL APPLICATION

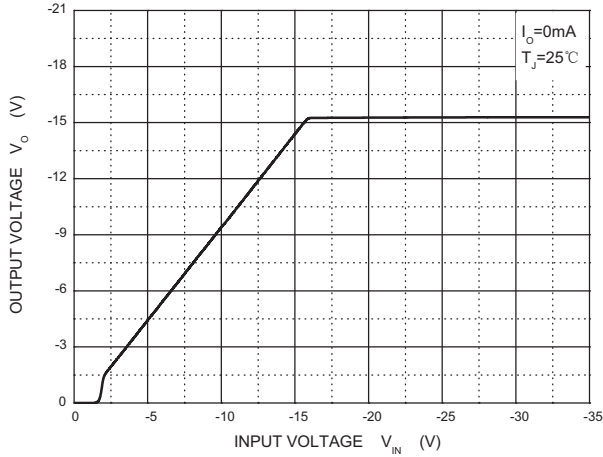


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

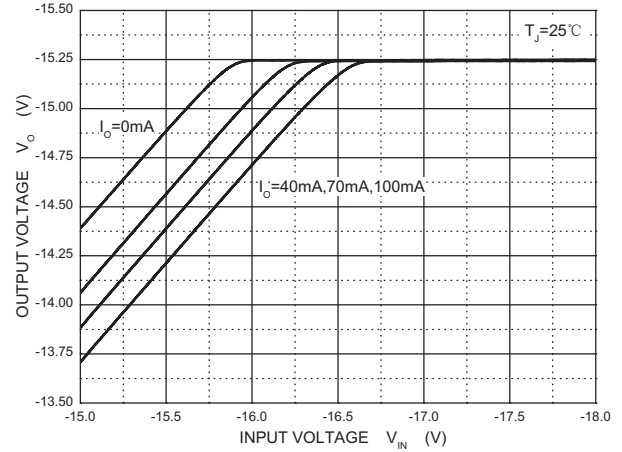
# RATINGS AND CHARACTERISTIC CURVES

## TYPICAL APPLICATION

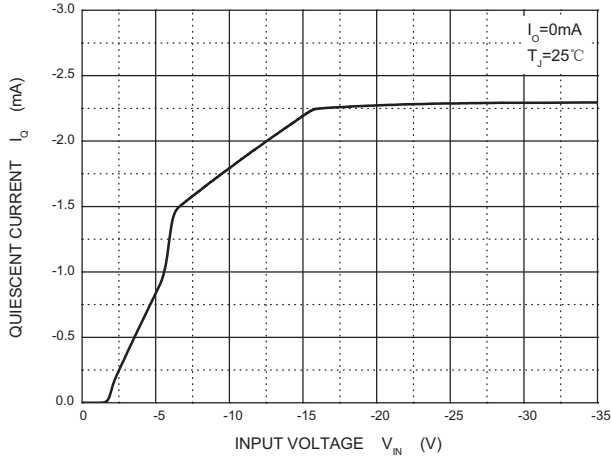
**Output Characteristics**



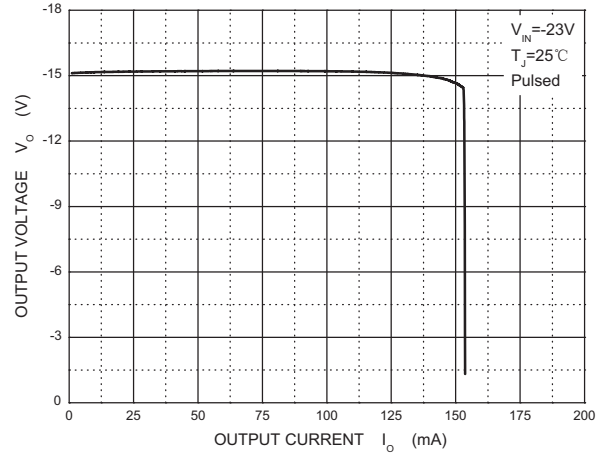
**Dropout Characteristics**



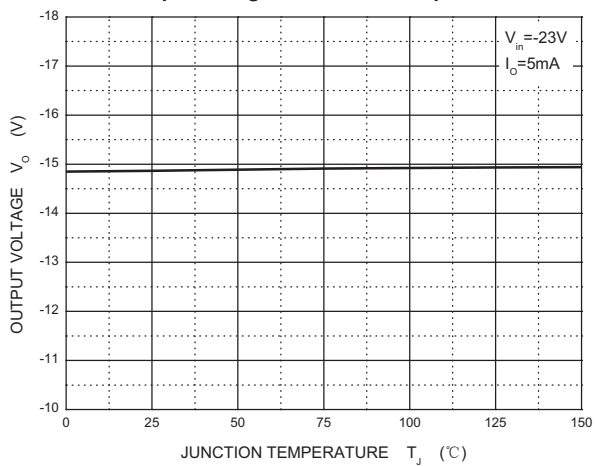
**Quiescent Current vs Input Voltage**



**Current Cut-off Grid Voltage**



**Output Voltage vs Junction Temperature**



**Power Derating Curve**

