

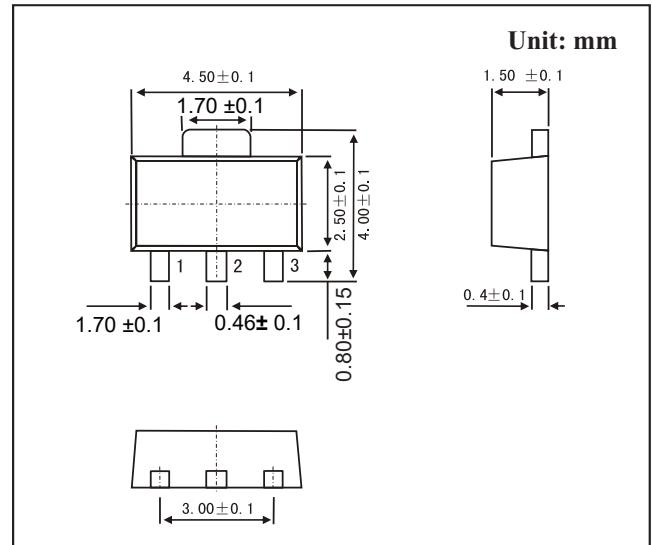
SOT-89 Three-terminal positive voltage regulator

FEATURES

- Maximum Output Current I_O : 0.1 A
- Output Voltage V_O : -15 V
- Continuous Total Dissipation
 P_D : 0.6 W ($T_A = 25^\circ\text{C}$)

MECHANICAL DATA

- Case: SOT-89 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any



ABSOLUTE MAXIMUM RATINGS

(Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	-30	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	208.3	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	0~+150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

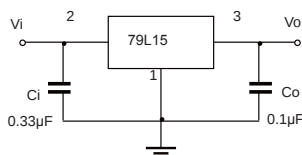
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE

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

Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Output voltage	V_o	25°C	-14.4		-15.6	V
		$-17.5\text{V} \leq V_i \leq -30\text{V}$, $I_o = 1\text{mA} \sim 40\text{mA}$	-14.25	-15	-15.75	V
		$I_o = 1\text{mA} \sim 70\text{mA}$, $0 \sim 125^\circ\text{C}$	-14.25	-		V
Load Regulation	ΔV_o	$I_o = 1\text{mA} \sim 100\text{mA}$, $V_i = -23\text{V}$, 25°C		25	150	mV
		$I_o = 1\text{mA} \sim 40\text{mA}$, $V_i = -23\text{V}$, 25°C		15	75	mV
Line regulation	ΔV_o	$-17.5\text{V} \leq V_i \leq -30\text{V}$, $I_o = 40\text{mA}$, 25°C		65	300	mV
		$-20\text{V} \leq V_i \leq -30\text{V}$, $I_o = 40\text{mA}$, 25°C		50	250	mV
Quiescent Current	I_q	25°C			6.5	mA
Quiescent Current Change	ΔI_q	$-2 \leq V_i \leq -30\text{V}$, $I_o = 40\text{mA}$, $0 \sim 125^\circ\text{C}$			1.5	mA
	ΔI_q	$1 \leq I_o \leq 40\text{mA}$, $0 \sim 125^\circ\text{C}$			0.1	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$, 25°C		90		$\mu\text{V}/V_o$
Ripple Rejection	RR	$-18.5\text{V} \leq V_i \leq -28.5\text{V}$, $f = 120\text{Hz}$, $0 \sim 125^\circ\text{C}$	34	3		dB
Dropout Voltage	V_d	25°C		1.7		V

* Pulse test.

TYPICAL APPLICATION

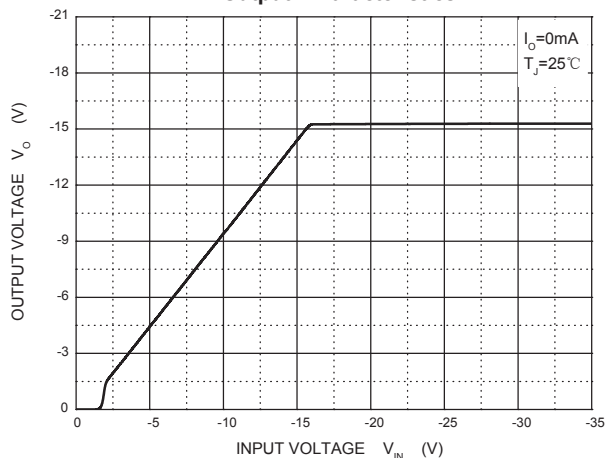


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

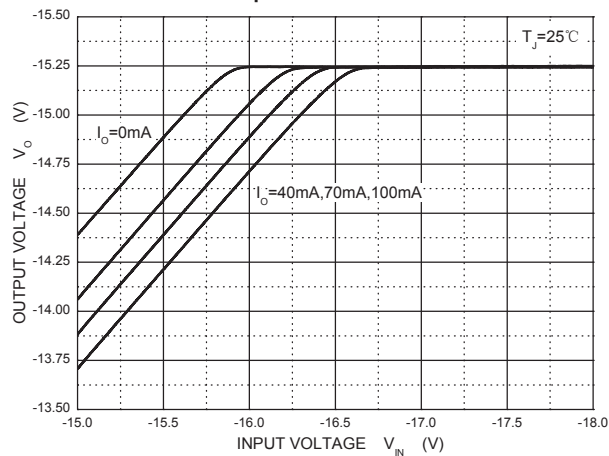
RATINGS AND CHARACTERISTIC CURVES

TYPICAL APPLICATION

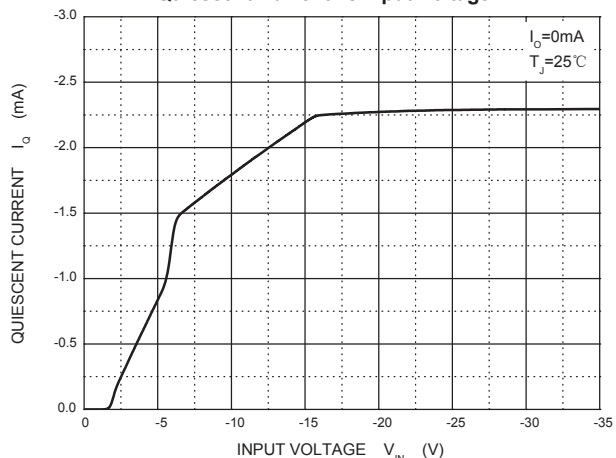
Output Characteristics



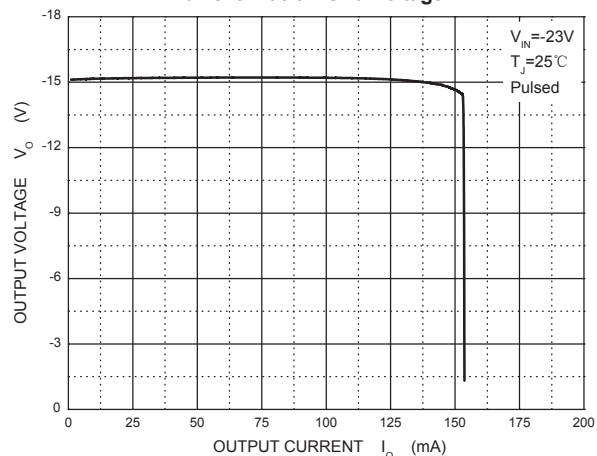
Dropout Characteristics



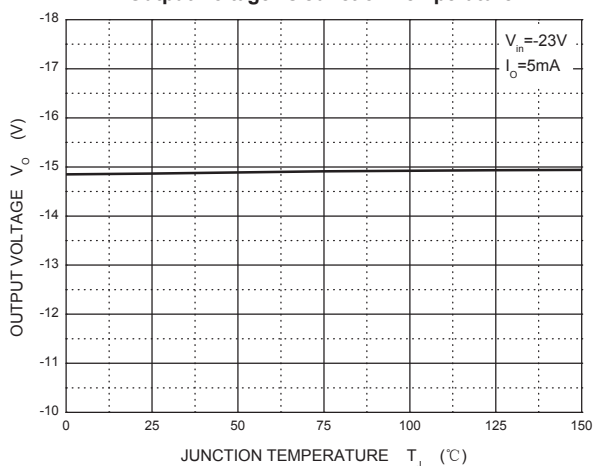
Quiescent Current vs Input Voltage



Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



Power Derating Curve

