

Encapsulate Three terminal voltage regulators

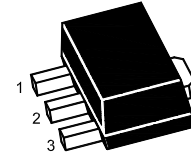
Three-terminal negative voltage regulator

FEATURES

- Maximum output current
 $I_{OM}: 100\text{mA}$
- Output voltage
 $V_O: -15\text{V}$
- Continuous total dissipation
 $P_D: 0.625\text{W}$

SOT-89 Plastic Package

- GND
- IN
- OUT



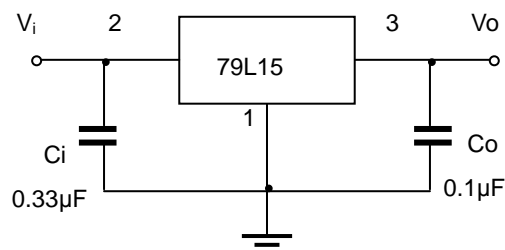
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Units
Input Voltage	V_i	-35	V
Operating Junction Temperature Range	T_{OPR}	0~+125	°C
Storage Temperature Range	T_{STG}	-55~+150	°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°C	-14.4	-15	-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
		$I_o=1\text{mA} \sim 70\text{mA}$	-14.25	-15	-15.75	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	$-20\text{V} \leq V_i \leq -30\text{V}$, $I_o=40\text{mA}$	$0 \sim 125^\circ\text{C}$		1.5	mA
	ΔI_q	$1\text{mA} \leq I_o \leq 40\text{mA}$	$0 \sim 125^\circ\text{C}$		0.1	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$	25°C	90		μV
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	39	dB
Dropout Voltage	V_d	25°C		1.7		V

TYPICAL APPLICATION

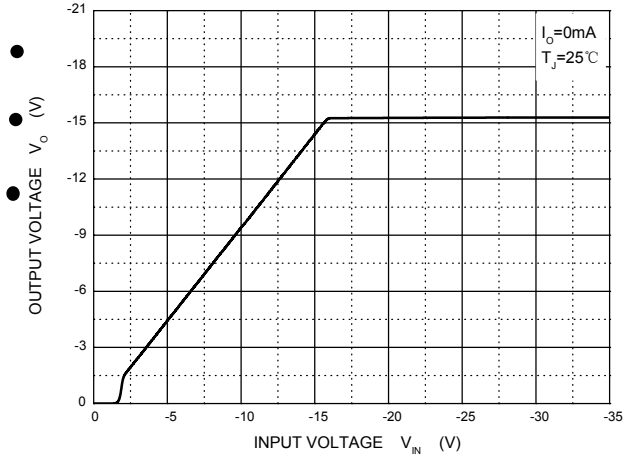


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

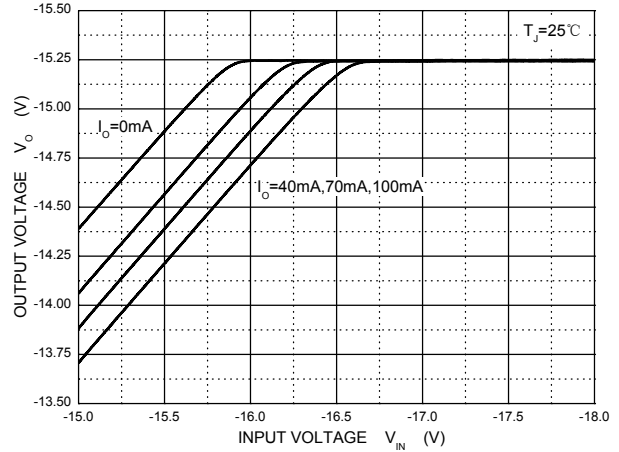


Typical Characteristics

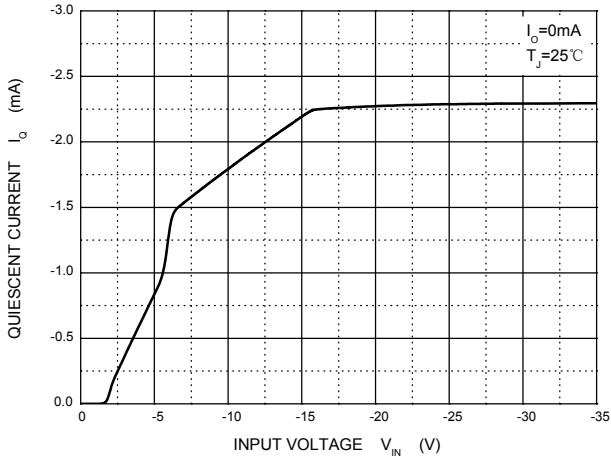
Output Characteristics



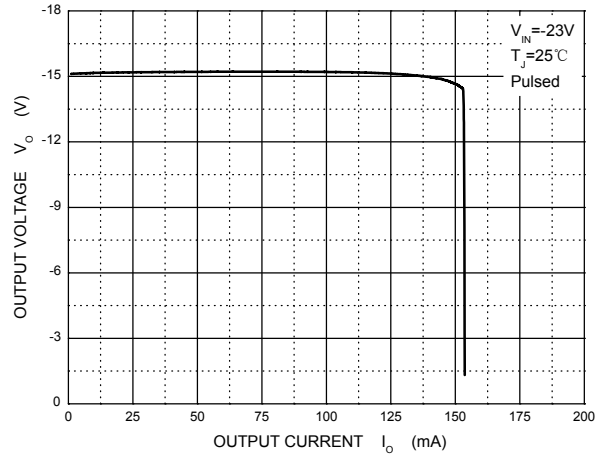
Dropout Characteristics



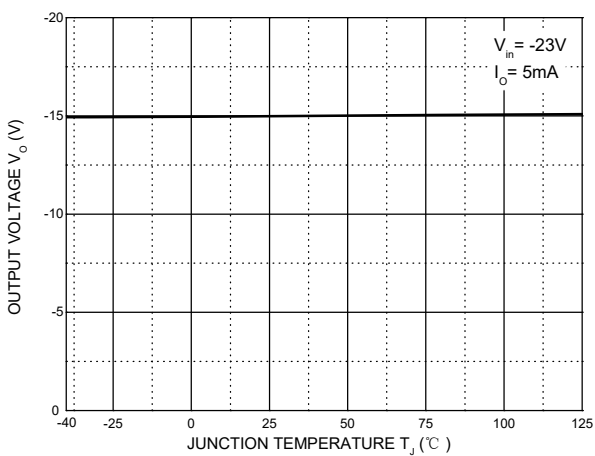
Quiescent Current vs Input Voltage



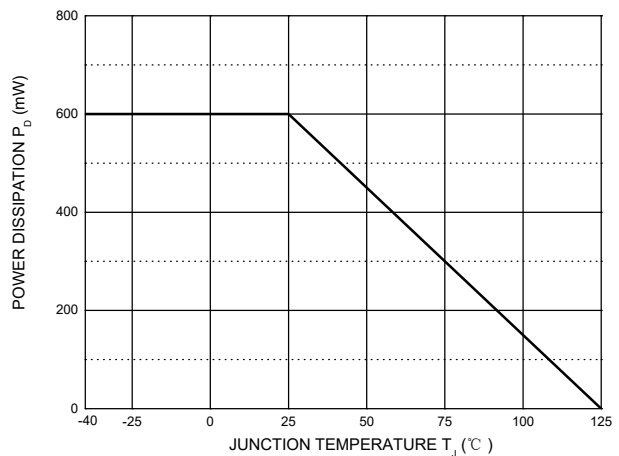
Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature

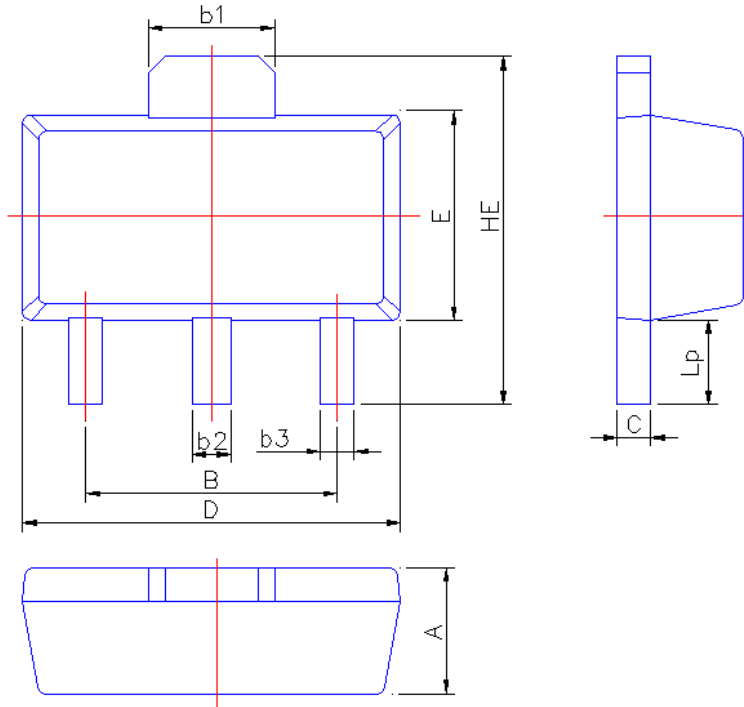


Power Derating Curve





SOT-89 PACKAGE OUTLINE



Symbol	Dimension in Millimeters	
	Min	Max
A	1.40	1.60
B	2.95	3.05
b1	1.45	1.70
b2	0.45	0.56
b3	0.35	0.50
C	0.35	0.50
D	4.40	4.60
E	2.35	2.55
HE	3.90	4.40
Lp	0.90	1.10