

SOT-23 Plastic-Encapsulate Voltage Regulators

79L09 Three-terminal positive voltage regulator

FEATURES

Maximum Output current I_O : 0.1 A

Output voltage V_O : -9 V

Continuous total dissipation P_D : 0.35 W ($T_a=25^\circ\text{C}$)

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies)

Parameter	Symbol	Value	Unit
Input Voltage	V_I	-30	V
Operating Junction Temperature Range	T_{OPR}	0-150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65-150	$^\circ\text{C}$

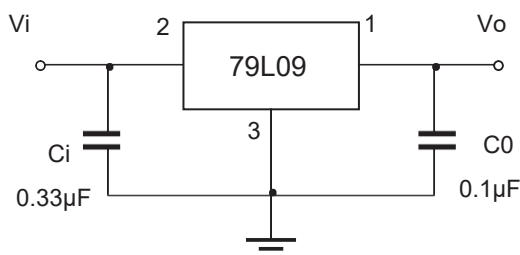


ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=-16\text{V}$, $I_o=40\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output voltage	V_o	25°C	-8.6	-9.0	-9.4	V	
		$-12\text{V} \leq V_i \leq -24\text{V}$, $I_o=1\text{mA} \sim 40\text{mA}$	$0-125^\circ\text{C}$	-8.55	-9.0	-9.45	V
		$I_o=1\text{mA} \sim 70\text{mA}$		-8.55	-9.0	-9.45	V
Load Regulation	ΔV_o	$I_o=1\text{mA} \sim 100\text{mA}$	25°C	30	100	mV	
		$I_o=1\text{mA} \sim 40\text{mA}$	25°C	15	50	mV	
Line regulation	ΔV_o	$-12\text{V} \leq V_i \leq -24\text{V}$	25°C	45	175	mV	
		$-13\text{V} \leq V_i \leq -24\text{V}$	25°C	40	125	mV	
Quiescent Current	I_q		25	4.1	6.2	mA	
Quiescent Current Change	ΔI_q	$-13\text{V} \leq V_i \leq -24\text{V}$	$0-125^\circ\text{C}$		1.5	mA	
		$1\text{mA} \leq I_o \leq 40\text{mA}$	$0-125^\circ\text{C}$		0.1	mA	
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$	25°C	62		μV	
Ripple Rejection	RR	$-15\text{V} \leq V_i \leq -23\text{V}$, $f=120\text{Hz}$	$0-125^\circ\text{C}$	40	45	dB	
Dropout Voltage	V_d		25°C	1.7		V	

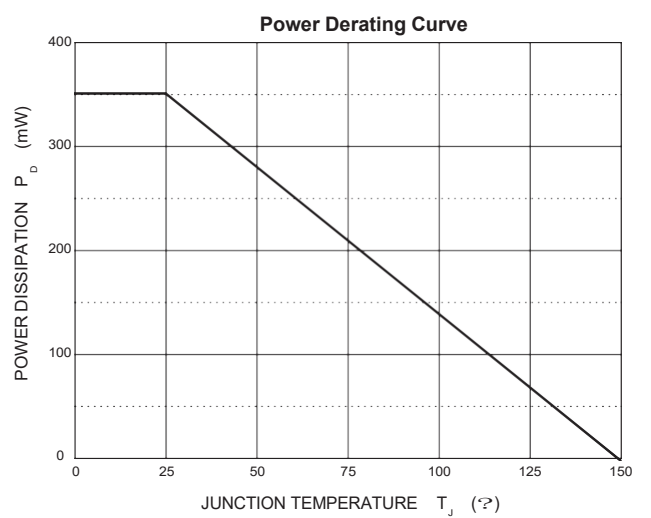
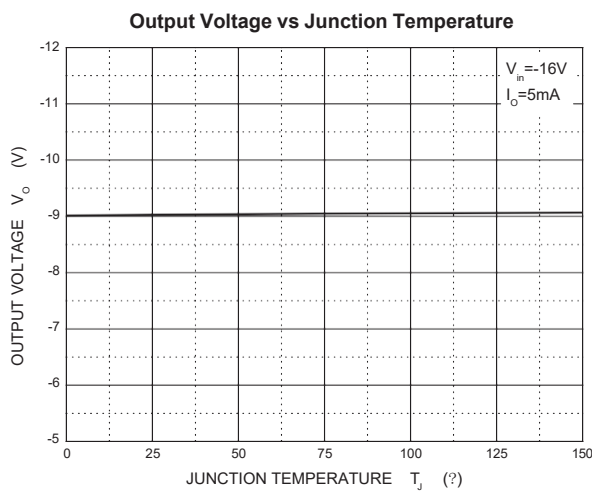
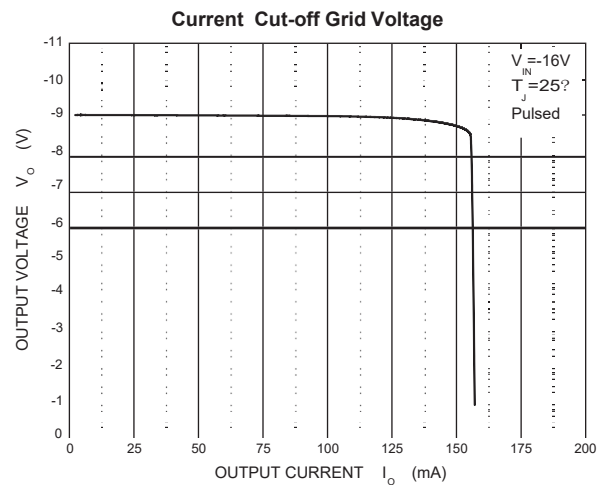
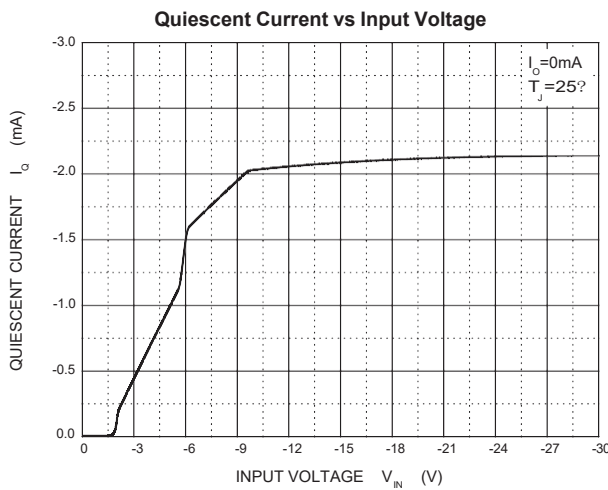
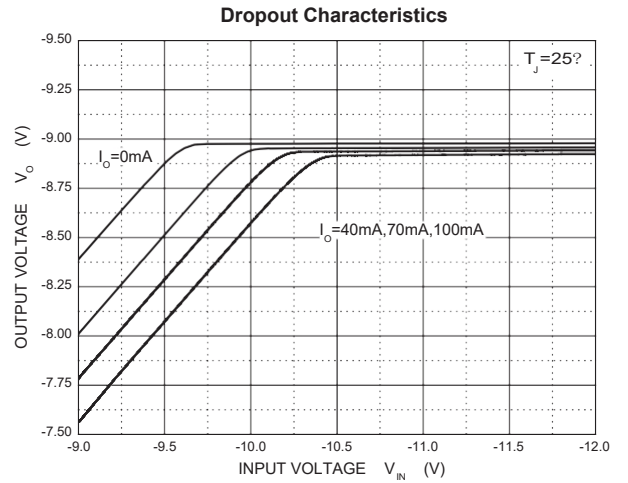
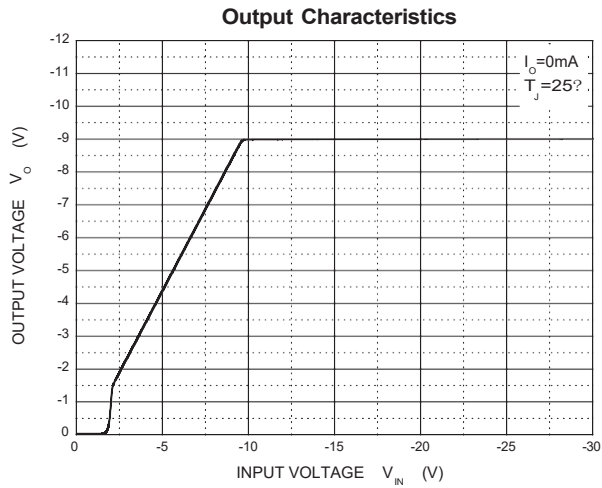
* Pulse test.

TYPICAL APPLICATION



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

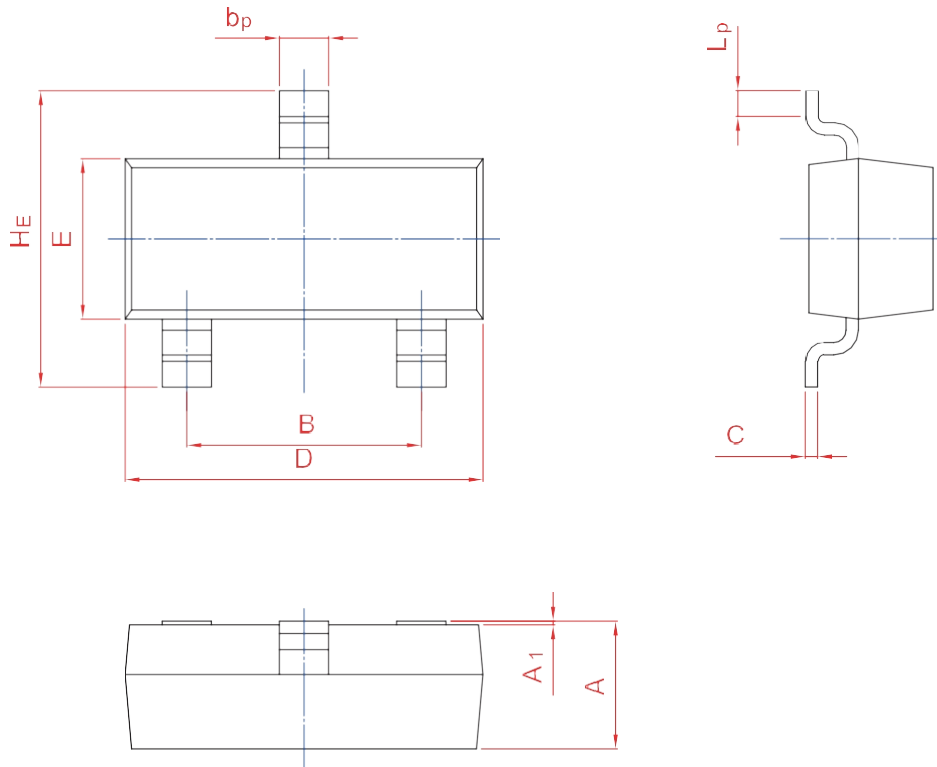
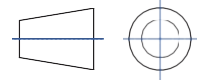
Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b _p	C	D	E	H _E	A ₁	L _p
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20