

Three-terminal positive voltage regulator

FEATURES

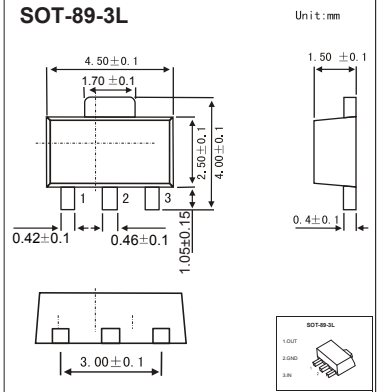
Maximum output current IOM: 0.1A
Output voltage VO: 9V

Continuous total dissipation

$$P_D: 0.6 \text{ W (} T_a = 25 \text{ } ^\circ\text{C)}$$

MECHANICAL DATA

- Case: SOT-89Small 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	$R_{\theta JA}$	166.7	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	-25~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

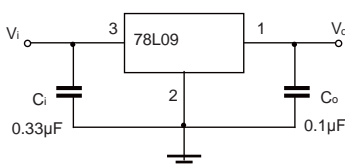
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE

($V_i=16\text{V}, I_o=40\text{mA}, C_i=0.33\mu\text{F}, C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output voltage	V_o	25°C	8.64	9.0	9.36	V	
		0-125 $^\circ\text{C}$	$12\text{V} \leq V_i \leq 24\text{V}, I_o=1\text{mA}-40\text{mA}$	8.55	9.0	9.45	V
			$I_o=1\text{mA}-70\text{mA}$	8.55	9.0	9.45	V
Load Regulation	ΔV_o	$I_o=1\text{mA}-100\text{mA}$	25°C	19	90	mV	
		$I_o=1\text{mA}-40\text{mA}$	25°C	11	40	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°C		4.1	6.0	mA	
Quiescent Current Change	ΔI_q	$13\text{V} \leq V_i \leq 24\text{V}$	0-125 $^\circ\text{C}$		1.5	mA	
	ΔI_q	$1\text{mA} \leq I_o \leq 40\text{mA}$	0-125 $^\circ\text{C}$		0.1	mA	
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$	25°C	58		$\mu\text{V}/V_o$	
Ripple Rejection	RR	$15\text{V} \leq V_i \leq 25\text{V}, f=120\text{Hz}$	0-125 $^\circ\text{C}$	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

