

Three-terminal positive voltage regulator

FEATURES

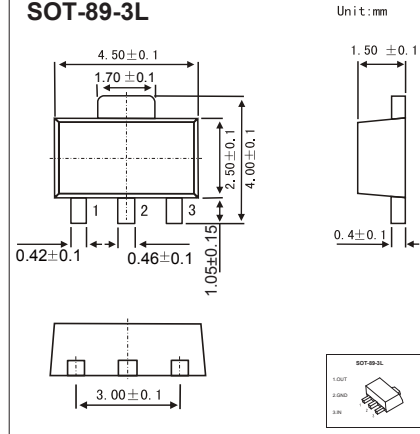
- Maximum output current IOM: 0.1A
- Output voltage VO: 6V
- Continuous total dissipation

$$PD: 0.6 W (T_a = 25^\circ C)$$

MECHANICAL DATA

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

SOT-89-3L



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

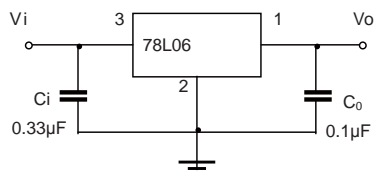
Parameter	Symbol	Value	Unit
Input Voltage	V_i	30	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	166.7	°C/W
Operating Junction Temperature Range	T_{OPR}	-25~+125	°C
Storage Temperature Range	T_{STG}	-65~+150	°C

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=11V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output voltage	V_o	25°C	5.75	6.0	6.25	V	
		0-125°C	$8V \leq V_i \leq 20V, I_o=1mA-40mA$	5.7	6.0	6.3	V
			$I_o=1mA-70mA$	5.7	6.0	6.3	V
Load Regulation	ΔV_o	$I_o=1mA-100mA$	25°C	16	80	mV	
		$I_o=1mA-40mA$	25°C	9	40	mV	
Line regulation	ΔV_o	$8V \leq V_i \leq 20V$	25°C	35	175	mV	
		$9V \leq V_i \leq 20V$	25°C	29	125	mV	
Quiescent Current	I_q	25°C		3.9	6.0	mA	
Quiescent Current Change	ΔI_q	$9V \leq V_i \leq 20V$	0-125°C		1.5	mA	
	ΔI_q	$1mA \leq I_o \leq 40mA$	0-125°C		0.1	mA	
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$	25°C	46		$\mu V/V_o$	
Ripple Rejection	RR	$9V \leq V_i \leq 19V, f=120Hz$	0-125°C	40	48	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 Characteristics

