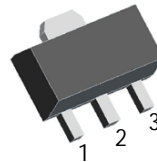




**78L06** Three-terminal positive voltage regulator SOT-89

**FEATURES**

- Maximum output current  
 $I_{OM}$ : 0.1A
- Output voltage  
 $V_O$ : 6V
- Continuous total dissipation  
 $P_D$ : 0.6 W ( $T_a=25^\circ\text{C}$ )



- 1. OUT
- 2. GND
- 3. IN

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

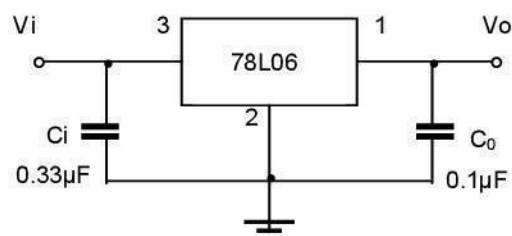
Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	30	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	166.7	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_{OPR}$	-25~+125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65~+150	$^\circ\text{C}$

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

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

