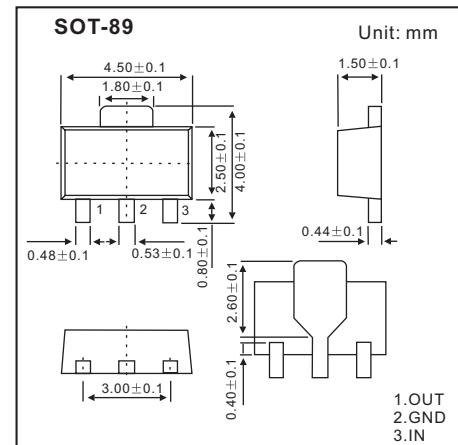


Three-Terminal Positive Voltage Regulator

LM78L06



■ Features

- Maximum Output current I_o : 0.1A
- Output Voltage V_o : 6V
- Continuous Total Dissipation P_D : 0.5W ($T_a = 25^\circ\text{C}$)

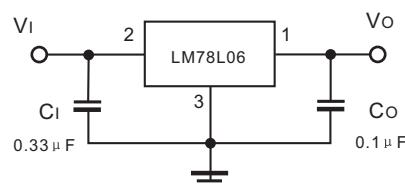
■ Absolute Maximum Ratings (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Rating	Unit
Input Voltage	V_I	30	V
Operating Junction Temperature Range	T_{OPR}	-55 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

■ Electrical Characteristics ($V_I=12\text{V}$, $I_o=40\text{mA}$, $C_I=0.33\text{ }\mu\text{F}$, $C_O=0.1\text{ }\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_J = 25^\circ\text{C}$	5.75	6.0	6.25	V
		$T_J = 0 \sim 125^\circ\text{C}$, $8\text{V} \leq V_I \leq 20\text{V}$, $I_o=1\text{mA} \sim 40\text{mA}$	5.7	6.0	6.3	V
		$T_J = 0 \sim 125^\circ\text{C}$, $I_o=1\text{mA} \sim 70\text{mA}$	5.7	6.0	6.3	V
Load Regulation	ΔV_o	$T_J = 25^\circ\text{C}$, $I_o=1\text{mA} \sim 100\text{mA}$		16	80	mV
		$T_J = 25^\circ\text{C}$, $I_o=1\text{mA} \sim 40\text{mA}$		9	40	mV
Line Regulation	ΔV_o	$T_J = 25^\circ\text{C}$, $8\text{V} \leq V_I \leq 20\text{V}$	35	175		mV
		$T_J = 25^\circ\text{C}$, $9\text{V} \leq V_I \leq 20\text{V}$	29	125		mV
Quiescent Current	I_Q	$T_J = 25^\circ\text{C}$	3.9	6.0		mA
Quiescent current Change	ΔI_Q	$T_J = 0 \sim 125^\circ\text{C}$, $9\text{V} \leq V_I \leq 20\text{V}$		1.5		mA
		$T_J = 0 \sim 125^\circ\text{C}$, $1\text{mA} \leq I_o \leq 40\text{mA}$		0.1		
Output Noise Voltage	V_N	$T_J = 25^\circ\text{C}$, $10\text{Hz} \leq f \leq 100\text{KHz}$	16			μ V
Ripple Rejection	RR	$T_J = 0 \sim 125^\circ\text{C}$, $9\text{V} \leq V_I \leq 19\text{V}$, $f = 120\text{Hz}$	40	48		dB
Dropout Voltage	V_D	$T_J = 25^\circ\text{C}$		1.7		V

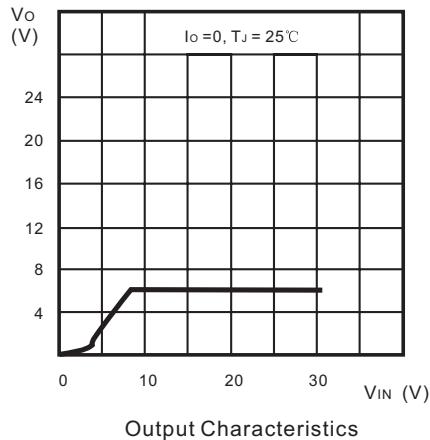
■ Typical Application



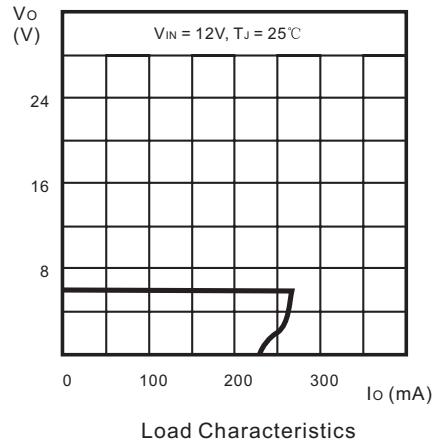
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

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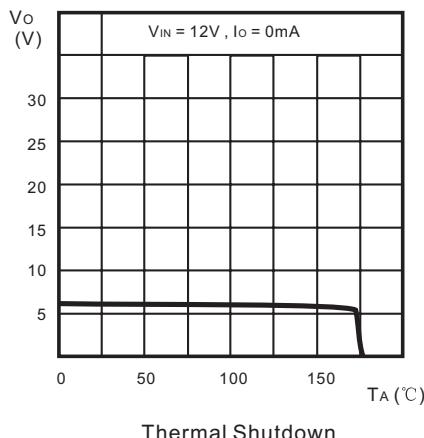
■ Typical Characteristics



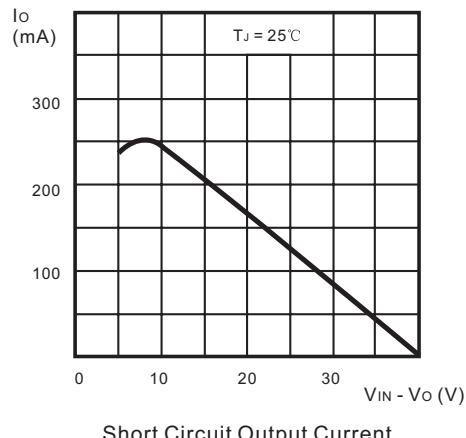
Output Characteristics



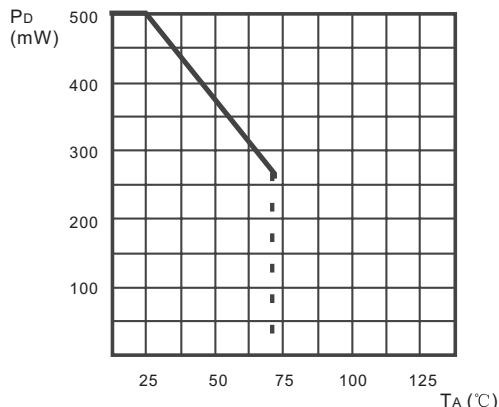
Load Characteristics



Thermal Shutdown



Short Circuit Output Current



Power Dissipation vs. Ambient Temperature