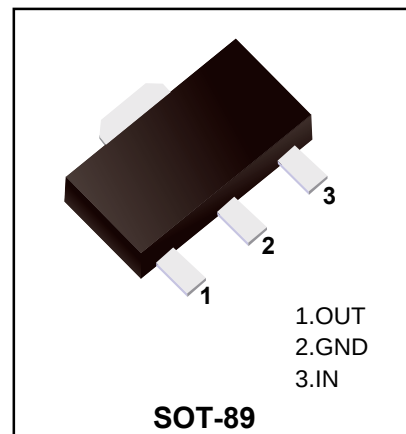


■ Three-Terminal Positive Voltage Regulator

■ Features

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



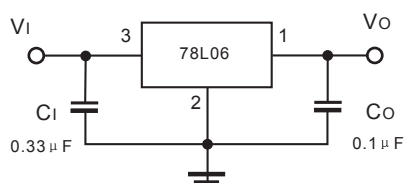
■ Absolute Maximum Ratings (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Rating	Unit
Input Voltage	V_I	30	V
Operating Junction Temperature Range	T_{OPR}	$-55 \sim +125$	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	$-55 \sim +150$	$^\circ\text{C}$

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

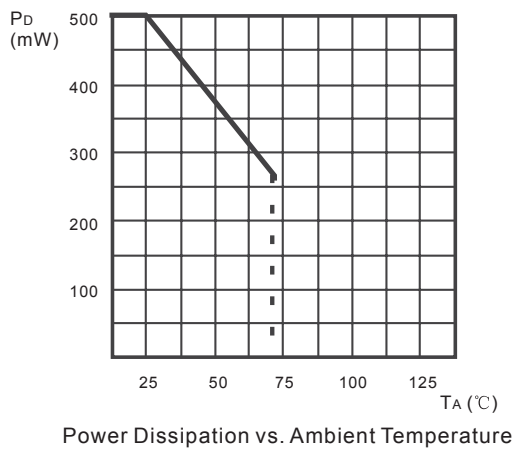
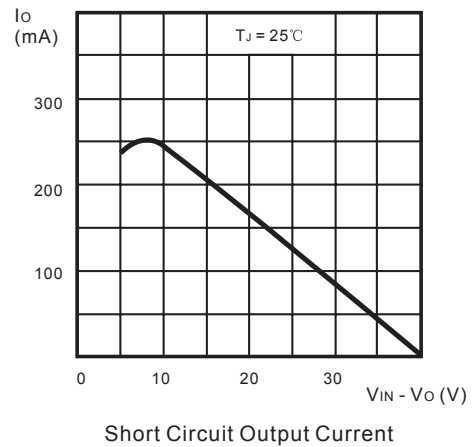
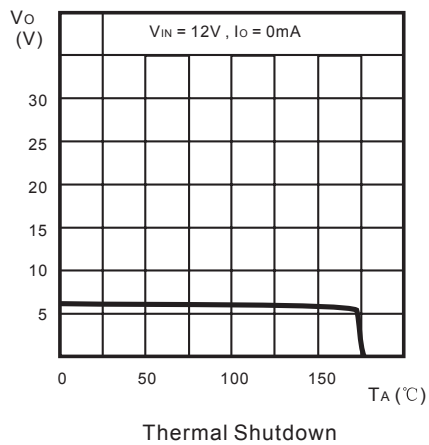
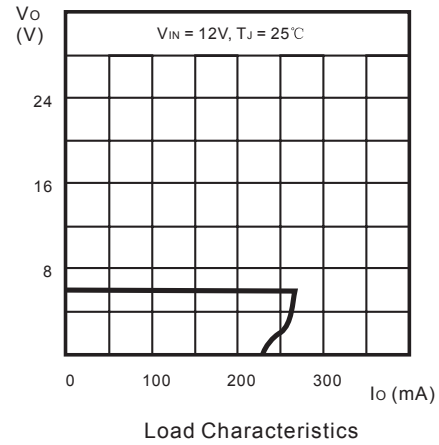
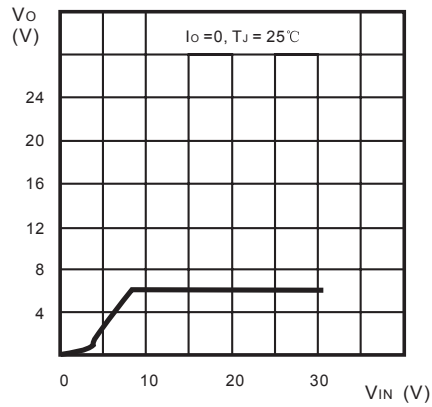
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_J = 25^\circ\text{C}$	5.75	6.0	6.25	V
		$T_J = 0 \sim 125^\circ\text{C}$, $8\text{V} \leq V_I \leq 20\text{V}$, $I_o = 1\text{mA} \sim 40\text{mA}$	5.7	6.0	6.3	V
		$T_J = 0 \sim 125^\circ\text{C}$, $I_o = 1\text{mA} \sim 70\text{mA}$	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	mA
Output Noise Voltage	V_N	$T_J = 25^\circ\text{C}$, $10\text{Hz} \leq f \leq 100\text{KHz}$		16		μV
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.

■ Typical Characteristics



Ordering information

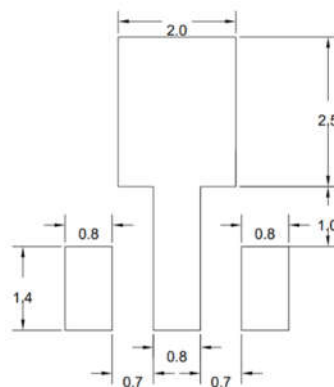
Package	Packing Description	Base Quantity	Packing Quantity
SOT-89	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton

Package Dimensions

SOT-89

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.40	1.60	0.055	0.063
b	0.32	0.52	0.013	0.020
b1	0.38	0.58	0.015	0.023
c	0.35	0.45	0.014	0.018
D	4.40	4.60	0.173	0.181
D1	1.45	1.65	0.057	0.065
D2	1.70	1.80	0.067	0.071
E	2.30	2.60	0.091	0.102
E1	3.95	4.25	0.156	0.167
E2	1.80	2.00	0.071	0.079
e	1.40	1.60	0.055	0.063
e1	2.80	3.20	0.110	0.126
L	0.90	1.20	0.035	0.047

The recommended mounting pad size



UNIT:MM

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