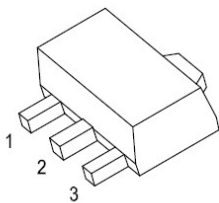


SOT-89-3L

1. OUT

2. GND

3. IN

**Marking: 78L05****SOT-89-3L Plastic-Encapsulate Voltage Regulators****特征 Features**

- Maximum output current I_{OM} : 0.1A
- Output voltage V_o : 5V
- Continuous total dissipation P_D : 0.6W ($T_a=25^\circ\text{C}$)

机械数据 Mechanical Data

- SOT-89-3L Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

Absolute Maximum Ratings (Operating temperature Range applies unless otherwise specified.)

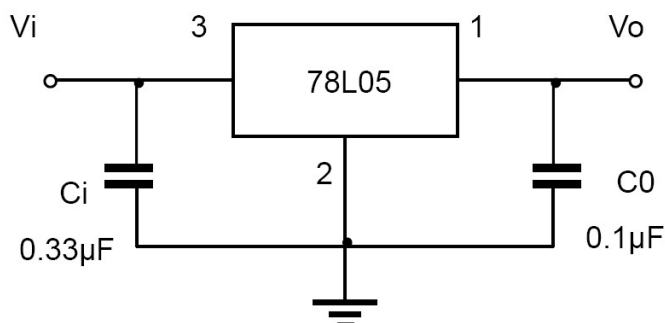
Parameters	Symbol	Value	Unit
Input Voltage	V_i	30	V
Operating Junction Temperature Range	T_{OPR}	-40-+125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65-+150	$^\circ\text{C}$
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	160	$^\circ\text{C/W}$

Electrical Characteristics at Specified Virtual Junction Temperature

(Vi=10V, Io=40mA, Ci=0.33uF, Co=0.1uF, unless otherwise specified).

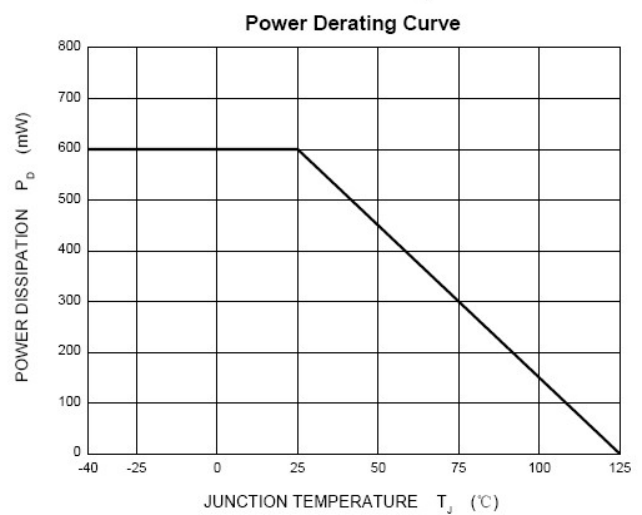
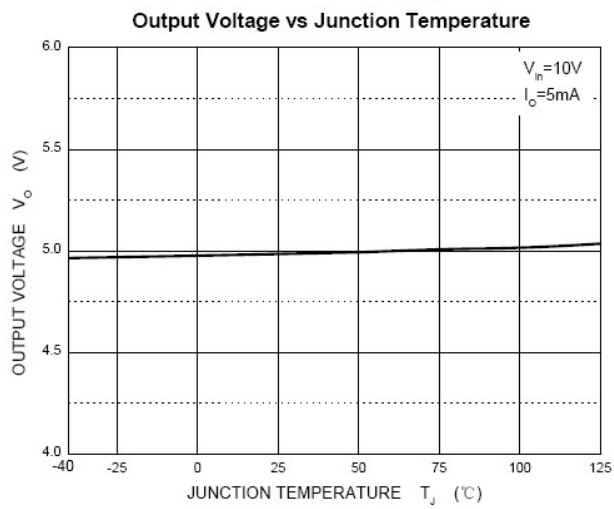
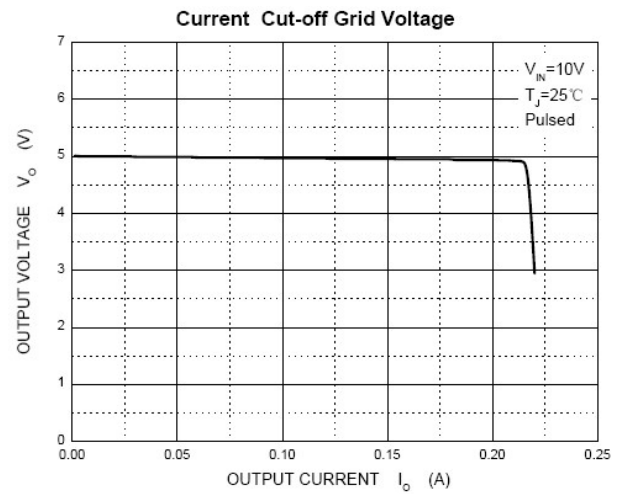
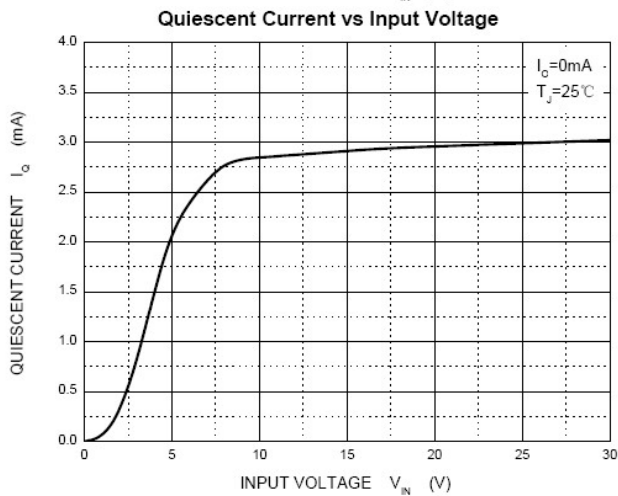
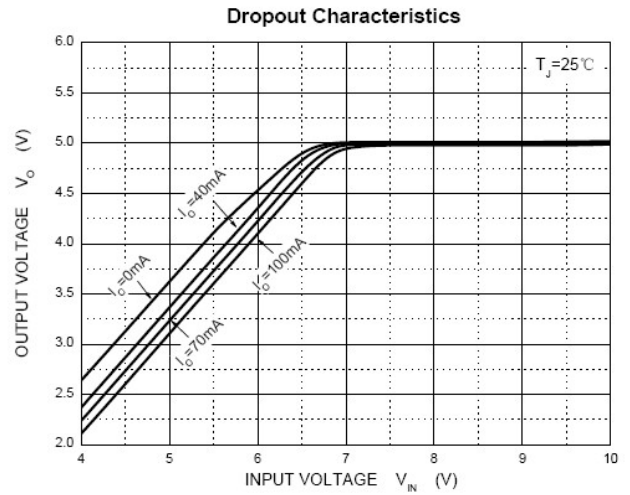
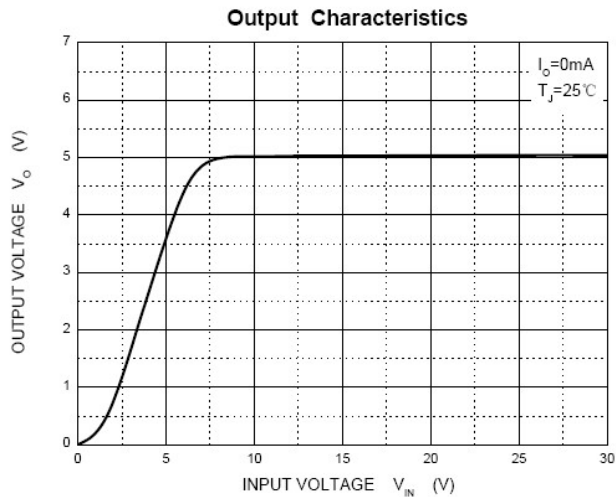
Parameter	Symbols	Test Condition	Limits			Unit
			Min	Typ	Max	
Output Voltage	V_o		4.80	5.00	5.20	V
			4.85	5.00	5.15	V
			4.90	5.00	5.10	V
		7V $\leq V_i \leq 20V$, $I_o=1mA \sim 40mA$	4.75	5.00	5.25	V
			4.75	5.00	5.25	V
Load Regulation	ΔV_o	$I_o=1mA \sim 100mA$		15	60	mV
		$I_o=1mA \sim 40mA$		8	30	mV
Line Regulation	ΔV_o	7V $\leq V_i \leq 20V$		32	150	mV
		8V $\leq V_i \leq 20V$		26	100	mV
Quiescent Current	I_q			3.8	6	mA
Quiescent Current Change	ΔI_q	8V $\leq V_i \leq 20V$			1.5	mA
	ΔI_q	1mA $\leq V_i \leq 40mA$			0.1	mA
Output Noise Voltage	V_N	10Hz $\leq f \leq 100KHz$		42		$\mu V/V_o$
Ripple Rejection	RR	8V $\leq V_i \leq 20V, f=120Hz$	41	49		dB
Dropout Voltage	V_d			1.7		V

* Pulse test.

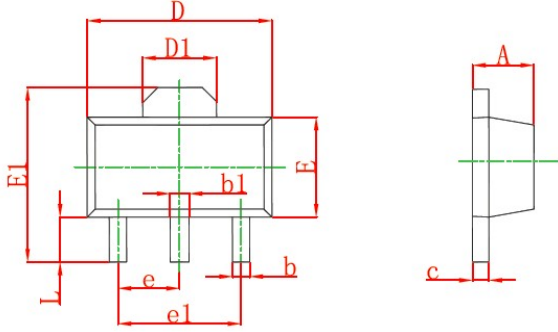
TYPICAL APPLICATION

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

Typical characteristics



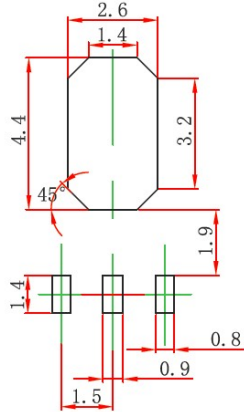
SOT-89-3L PACKAGE OUTLINE Plastic surface mounted package



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

Precautions: PCB Design

Recommended land dimensions for SOT-89-3L diode. Electrode patterns for PCBs



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.