



## SOT-89 Three Terminal Regulator 三端稳压 IC

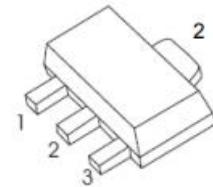
### ■ Features 特点

**Pin 脚位:** 1.Output 输出 2.Ground 地 3.Input 输入

**Output Voltage 输出电压:** 5V

**Output Current 输出电流:** 0.1A

**Power dissipation 耗散功率:** 0.6W



### ■ Absolute Maximum Ratings 最大额定值

( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Input Voltage 输入电压	$V_i$	35	V
Operating Current 工作电流	$I_o$	100	mA
Power dissipation 耗散功率	$P_D$	600	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	208	$^{\circ}\text{C}/\text{W}$
Solder Temperature 焊接温度/时间	$T_d$	260	$^{\circ}\text{C}$
Solder Temperature/Time 焊接时间	$T_d$	10	S
Operating Ambient Temperature 工作温度	$T_A$	-40~+125	$^{\circ}\text{C}$
Junction and Storage Temperature 结温和储藏温度	$T_J, T_{stg}$	-55to+150 $^{\circ}\text{C}$	

### ■ Device Marking 产品字标

78L05=78L05



## ■ Electrical Characteristics 电特性

( $V_I=10V$   $I_O=40mA$   $C_i=0.33\mu F$   $C_o=0.1\mu F$   $T_A=25^\circ C$  unless otherwise noted 如无特殊说明 )

Characteristic 特性参数	Symbol 符号	Test Condition 测试条件	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Output Voltage 输出电压	$V_O$	$V_I=10V$ $I_O=40mA$	4.85	5	5.15	V
Output Voltage 输出电压	$V_O$	$7V \leq V_I \leq 25V$ $1mA \leq I_O \leq 40mA$	4.8		5.2	V
Output Voltage 输出电压	$V_O$	$7V \leq V_I \leq 25V$ $1mA \leq I_O \leq 100mA$	4.75		5.25	V
Output Current 输出电流	$I_O$	$V_I=10V$		100		mA
Dropout Voltage 落差电压	$V_D$	$I_O=40mA$		1.7		V
Quiescent Current 静态电流	$I_q$	$V_I=10V$ $I_O=0$		3.75	6	mA
Quiescent Current Change 静态电流变化	$\Delta I_q$	$8V \leq V_I \leq 25V$			1.0	mA
Quiescent Current Change 静态电流变化	$\Delta I_q$	$1mA \leq I_O \leq 40mA$			1.0	mA
Line Regulation 线性调整	$\Delta V_O$	$I_O=10mA$ $7V \leq V_I \leq 25V$		18	75	mV
Line Regulation 线性调整	$\Delta V_O$	$I_O=10mA$ $9V \leq V_I \leq 25V$		10	54	mV
Load Regulation 负载调整	$\Delta V_O$	$1mA \leq I_O \leq 100mA$ $V_I=10V$		20	60	mV
Load Regulation 负载调整	$\Delta V_O$	$1mA \leq I_O \leq 40mA$ $V_I=10V$		5	30	mV
Output Noise Voltage 噪声电压	$V_N$	$10Hz \leq f \leq 100kHz$		40		$\mu V$
Ripple Rejection 纹波抑制	RR	$8V \leq V_I \leq 16V$ $f=120Hz$	47	62		dB

## ■ Typical Characteristic Curve 典型特性曲线

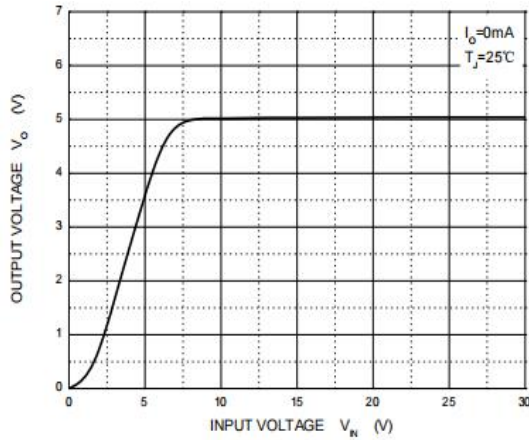


Figure 1: Transfer Characteristics

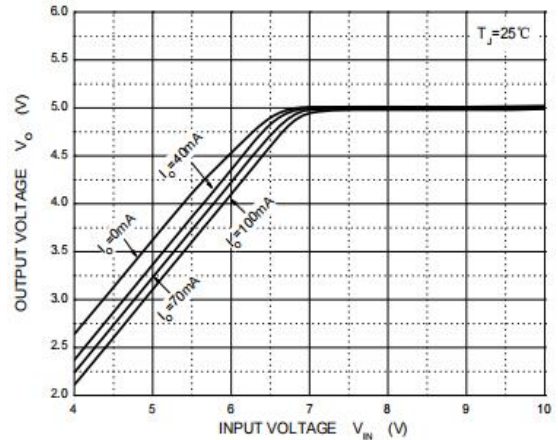


Figure 2: Dropout Characteristics

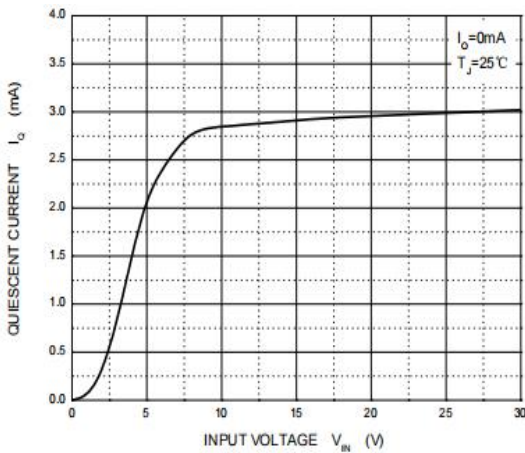


Figure 3: Quiescent Current Characteristics

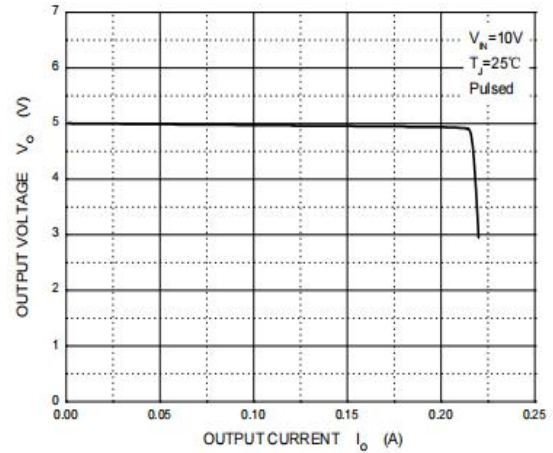


Figure 4: Output Characteristics

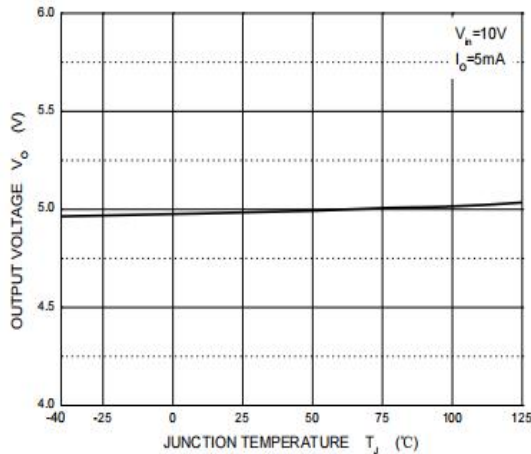


Figure 5: Temperature Characteristics

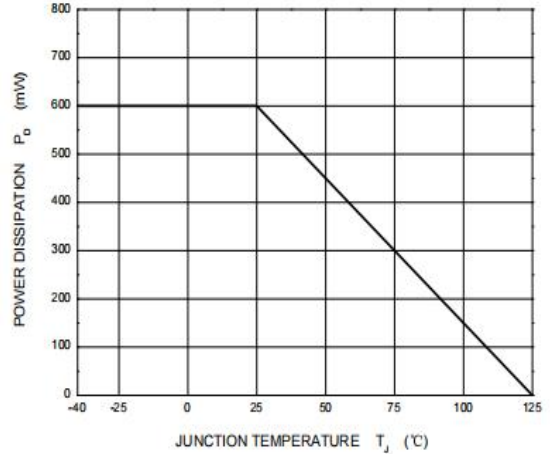
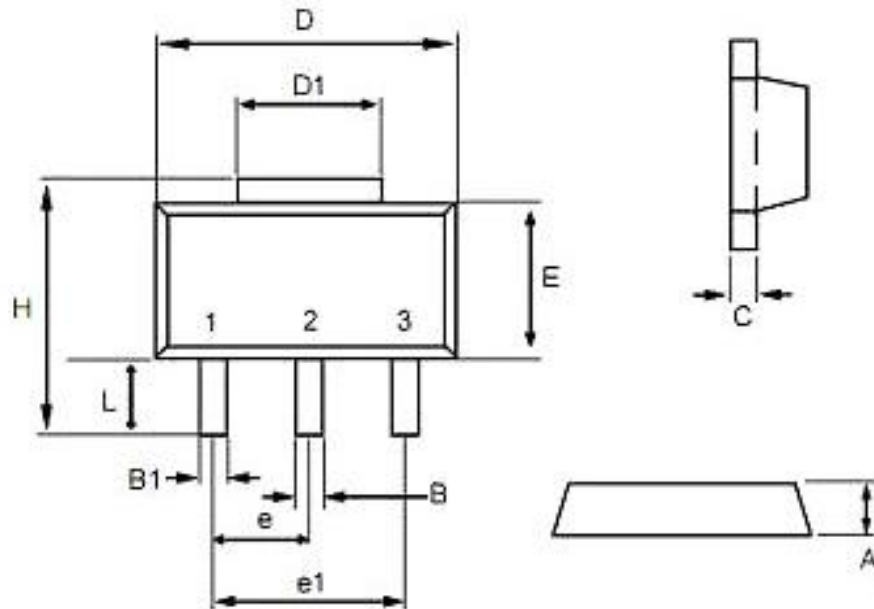


Figure 6: Power Characteristics

## ■SOT-89 Dimension 外形封装尺寸



Dim	min	max
A	1.40	1.60
B	0.40	0.56
B1	0.35	0.48
C	0.35	0.44
D	4.40	4.60
D1	1.35	1.83
e	1.50 BSC	
e1	3.00 BSC	
E	2.29	2.60
H	3.75	4.25
L	0.80	1.20

Dimensions In Millimeters

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