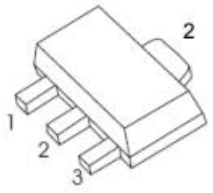
SOT-89 Three Terminal Regulator 三端稳压 IC

■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℃ unless otherwise noted 如无特殊说明，温度为 25℃**)**

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	℃/W
Solder Temperature 焊接温度/时间	Td	260	℃
Solder Temperature/Time 焊接时间	Td	10	S
Operating Ambient Temperature 工作温度	T_A	-40~+125	℃
Junction and Storage Temperature 结温和储藏温度	T_J,T_{stg}	-55to+150℃	

■Device Marking 产品字标

FS78L05=78L05

■Electrical Characteristics 电特性

(Vi=10V Io=40mA Ci=0.33uF Co=0.1uF T_A=25℃ 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≤V_I≤25V 1mA≤I_O≤40mA	4.8		5.2	V
Output Voltage 输出电压	V_O	7V≤V_I≤25V 1mA≤I_O≤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	ΔI_q	8V≤V_I≤25V			1.0	mA
Quiescent Current Change 静态电流变化	ΔI_q	1mA≤I_O≤40mA			1.0	mA
Line Regulation 线性调整	ΔV_O	I_O=10mA 7V≤V_I≤25V		18	75	mV
Line Regulation 线性调整	ΔV_O	I_O=10mA 9V≤V_I≤25V		10	54	mV
Load Regulation 负载调整	ΔV_O	1mA≤I_O≤100mA V_I=10V		20	60	mV
Load Regulation 负载调整	ΔV_O	1mA≤I_O≤40mA V_I=10V		5	30	mV
Output Noise Voltage 噪声电压	V_N	10Hz≤f≤100kHz		40		μV
Ripple Rejection 纹波抑制	RR	8V≤V_I≤16V f=120Hz	47	62		dB

■Typical Characteristic Curve 典型特性曲线

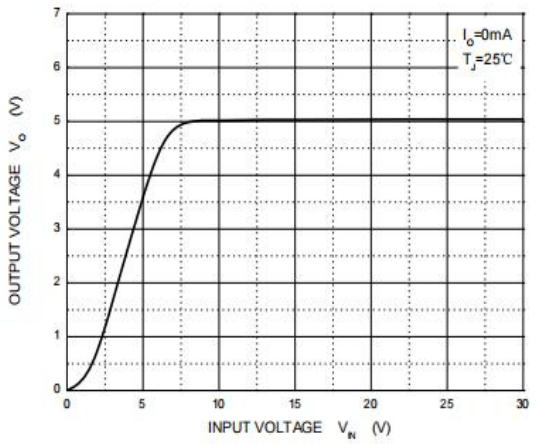


Figure 1: Transfer Characteristics

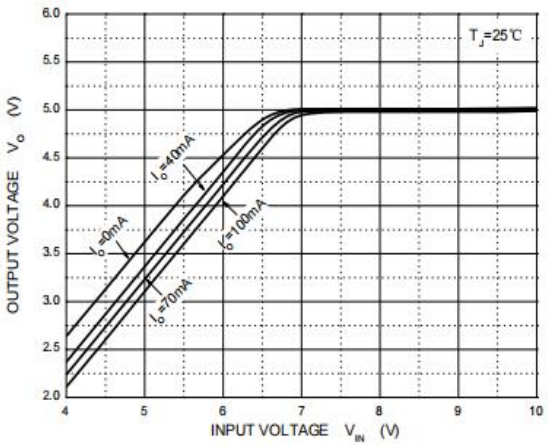


Figure 2: Dropout Characteristics

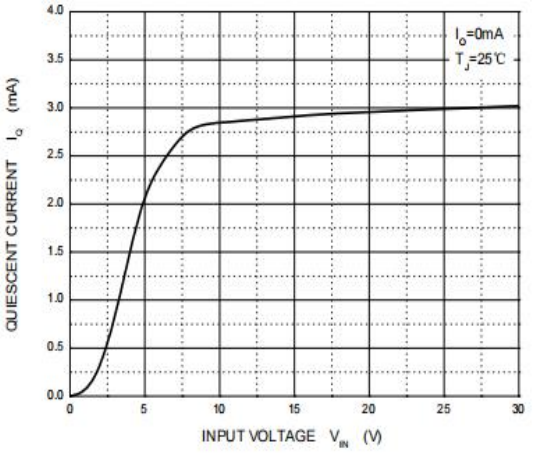


Figure 3: Quiescent Current Characteristics

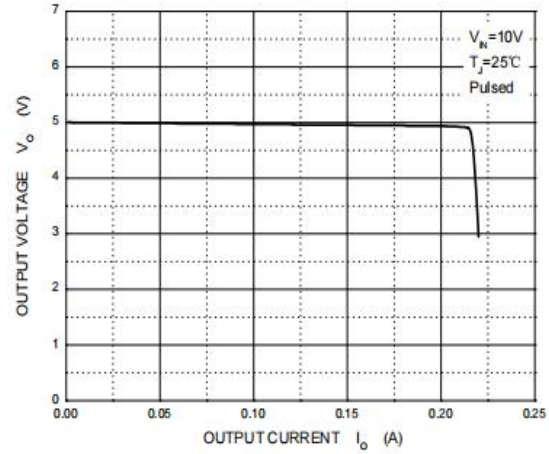


Figure 4: Output Characteristics

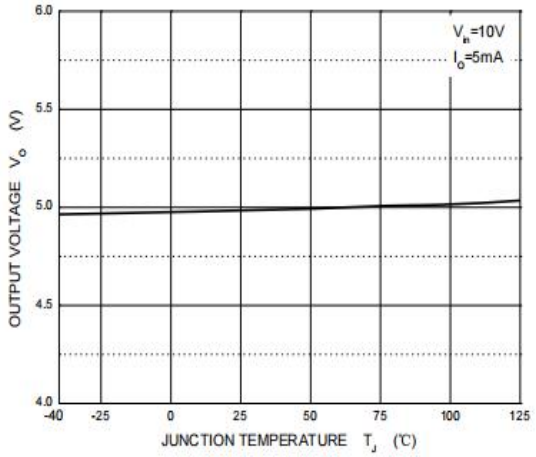


Figure 5: Temperature Characteristics

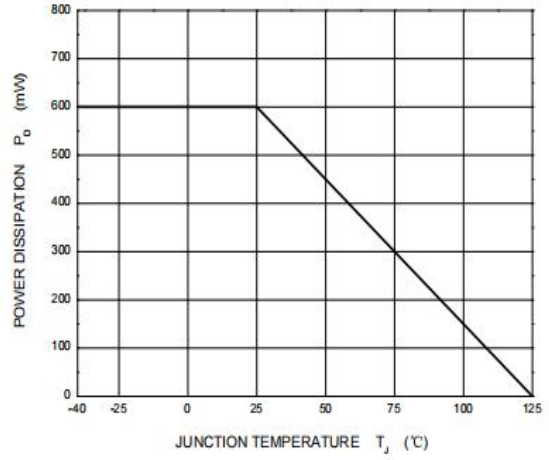
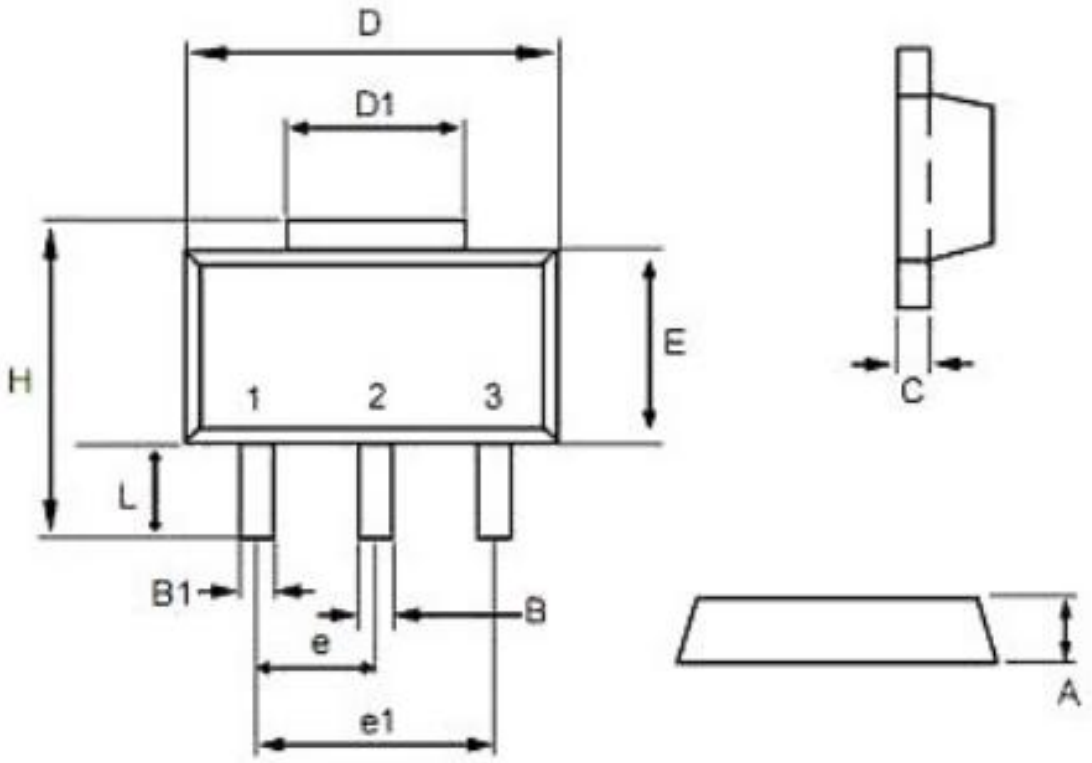


Figure 6: Power Characteristics

■SOT-89 Dimension 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.40	1.60	0.055	0.063
B	0.40	0.56	0.016	0.022
B1	0.35	0.48	0.014	0.019
C	0.35	0.44	0.014	0.017
D	4.40	4.60	0.173	0.181
D1	1.35	1.83	0.053	0.072
e	1.45	1.55	0.057	0.061
e1	2.95	3.05	0.116	0.120
E	2.29	2.60	0.090	0.102
H	3.75	4.25	0.148	0.167
L	0.80	1.20	0.031	0.047