

SOT-23 Three Terminal Regulator 三端稳压 IC

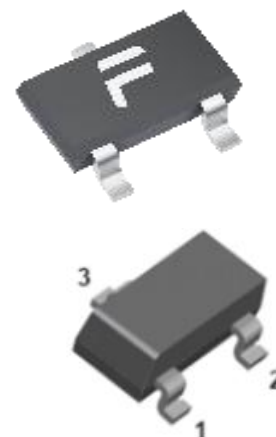
■Features 特点

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

Output Voltage 输出电压: 9V

Output Current 输出电流: 0.1A

Power dissipation 耗散功率: 0.25W



■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°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	250	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	500	$^{\circ}\text{C}/\text{W}$
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

FSS78L09M=L09

■Electrical Characteristics 电特性

(Vi=15V Io=40mA Ci=0.33uF Co=0.1uF TA=25°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	Vo	Vi=15V Io=40mA	8.64	9	9.36	V
Output Voltage 输出电压	Vo	11V≤Vi≤24V 1mA≤Io≤40mA	8.55	9	9.45	V
Output Voltage 输出电压	Vo	Vi=15V 1mA≤Io≤70mA	8.55	9	9.45	V
Output Current 输出电流	Io	Vi=15V	100			mA
Dropout Voltage 落差电压	VD	Io=40mA		1.7		V
Quiescent Current 静态电流	Iq	Vi=15V Io=0		2	5.5	mA
Quiescent Current Change 静态电流变化	ΔIq	12V≤Vi≤23V			1.5	mA
Quiescent Current Change 静态电流变化	ΔIq	1mA≤Io≤40mA			0.1	mA
Line Regulation 线性调整	ΔVo	Io=40mA 11.5V≤Vi≤23V		18	225	mV
Line Regulation 线性调整	ΔVo	Io=40mA 12V≤Vi≤23V		9	150	mV
Load Regulation 负载调整	ΔVo	1mA≤Io≤100mA Vi=15V		27	80	mV
Load Regulation 负载调整	ΔVo	1mA≤Io≤40mA Vi=15V		18	40	mV
Output Noise Voltage 噪声电压	VN	10Hz≤f≤100kHz		70		μV/Vo
Temperature coefficient of Vo 输出电压温度系数	ΔVo/ΔT	Io=5mA		0.85		mV/°C
Ripple Rejection 纹波抑制	RR	12V≤Vi≤23V f=120Hz	36	44		dB

■ Typical Characteristic Curve 典型特性曲线

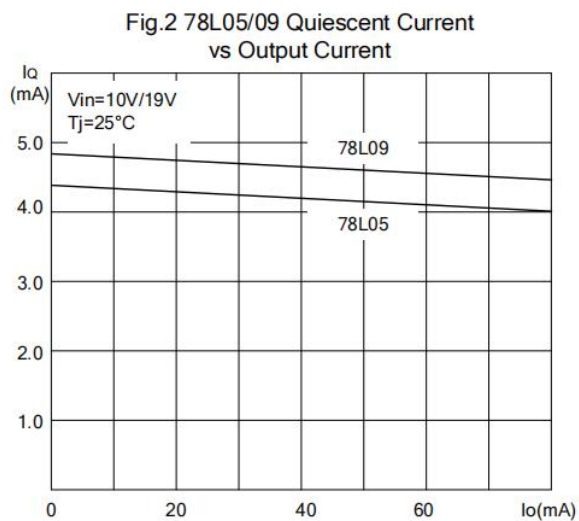
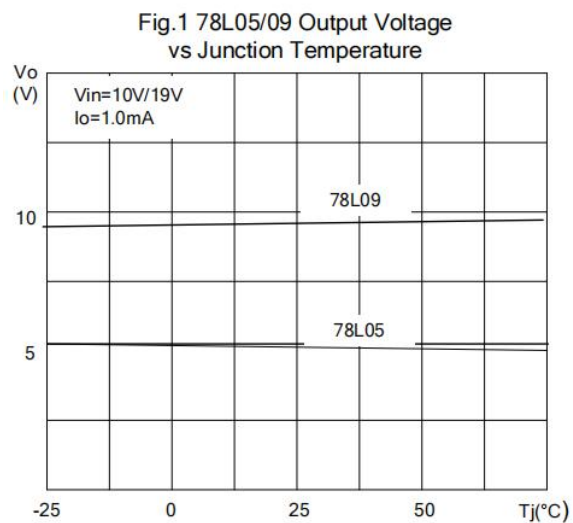


Fig.3 78L05/09 Thermal Shutdown

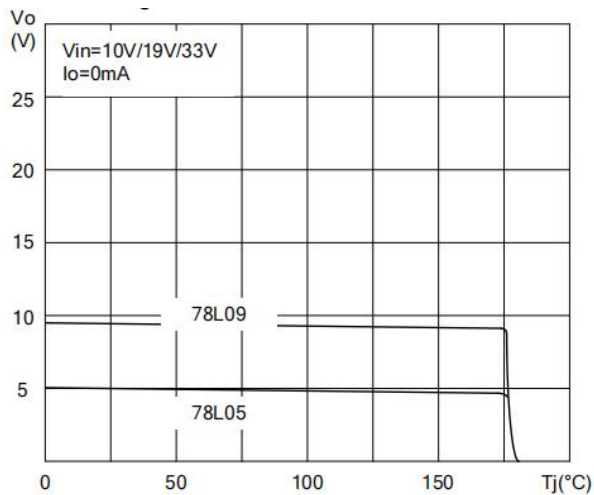
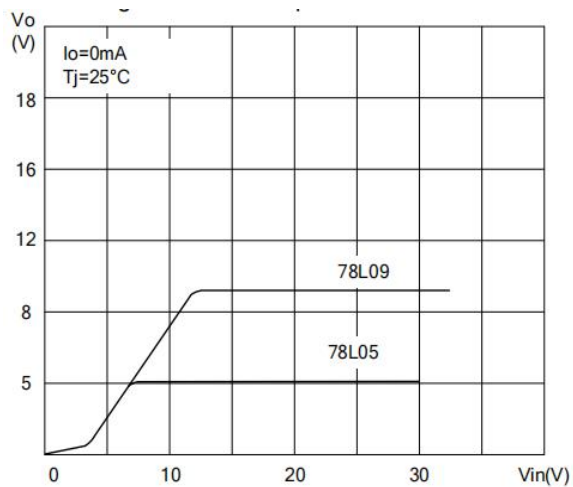
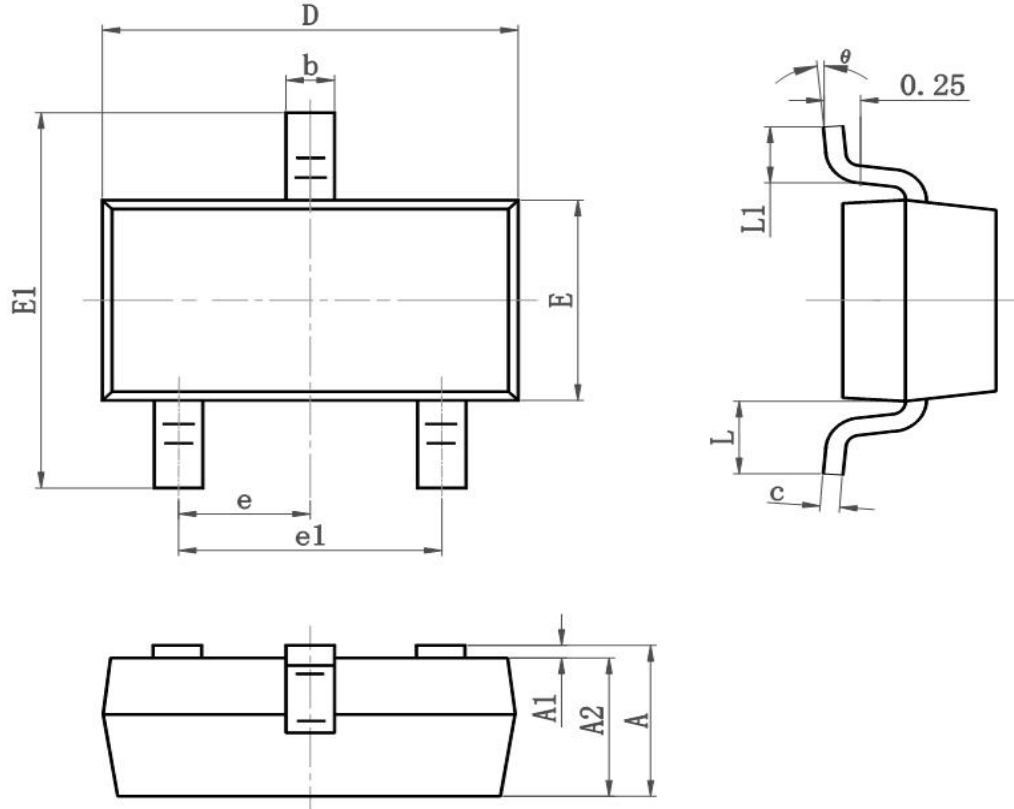


Fig.4 78L05/09 Output Characteristics



■SOT-23 Dimension 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.050	0.055
E1	2.250	2.550	0.089	0.100
e	0.900	1.00	0.035	0.039
e1	1.800	2.000	0.071	0.079
L	0.500	0.600	0.020	0.024
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°