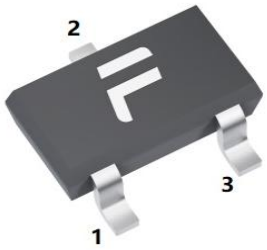
SOT-23 Three Terminal Regulator 三端稳压 IC

■Features 特点



Pin 脚位：1.Output 输出　2.Ground 地　3.Input 输入
Output Voltage 输出电压：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℃ 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	250	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\Theta JA}$	500	℃/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

FSS78L09M=L09

■Electrical Characteristics 电特性

(Vi=15V 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=15V I_O=40mA	8.64	9	9.36	V
Output Voltage 输出电压	V_O	11V≤V_I≤24V 1mA≤I_O≤40mA	8.55	9	9.45	V
Output Voltage 输出电压	V_O	V_I=15V 1mA≤I_O≤70mA	8.55	9	9.45	V
Output Current 输出电流	I_O	V_I=15V	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=15V I_O=0		2	5.5	mA
Quiescent Current Change 静态电流变化	ΔI_q	12V≤V_I≤23V			1.5	mA
Quiescent Current Change 静态电流变化	ΔI_q	1mA≤I_O≤40mA			0.1	mA
Line Regulation 线性调整	ΔV_O	I_O=40mA 11.5V≤V_I≤23V		18	225	mV
Line Regulation 线性调整	ΔV_O	I_O=40mA 12V≤V_I≤23V		9	150	mV
Load Regulation 负载调整	ΔV_O	1mA≤I_O≤100mA V_I=15V		27	80	mV
Load Regulation 负载调整	ΔV_O	1mA≤I_O≤40mA V_I=15V		18	40	mV
Output Noise Voltage 噪声电压	V_N	10Hz≤f≤100kHz		70		μV/V_O
Temperature coefficient of Vo 输出电压温度系数	$\Delta V_O/\Delta T$	I_O=5mA		0.85		mV/℃
Ripple Rejection 纹波抑制	RR	12V≤V_I≤23V f=120Hz	36	44		dB

■Typical Characteristic Curve 典型特性曲线

Fig.1 78L05/09 Output Voltage vs Junction Temperature

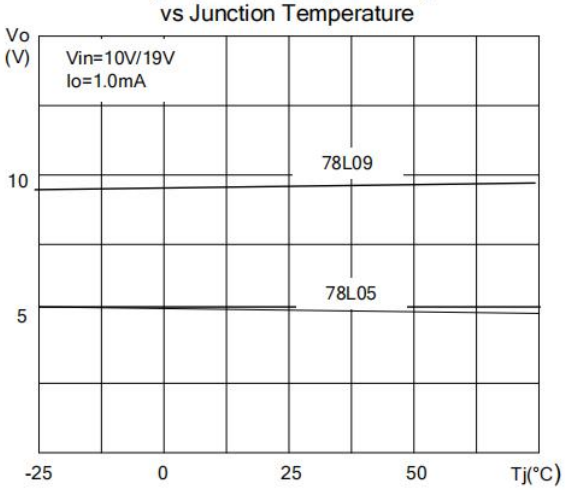


Fig.2 78L05/09 Quiescent Current vs Output Current

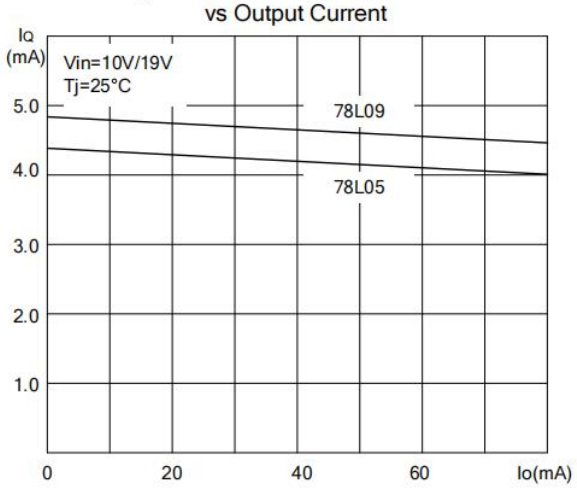


Fig.3 78L05/09 Thermal Shutdown

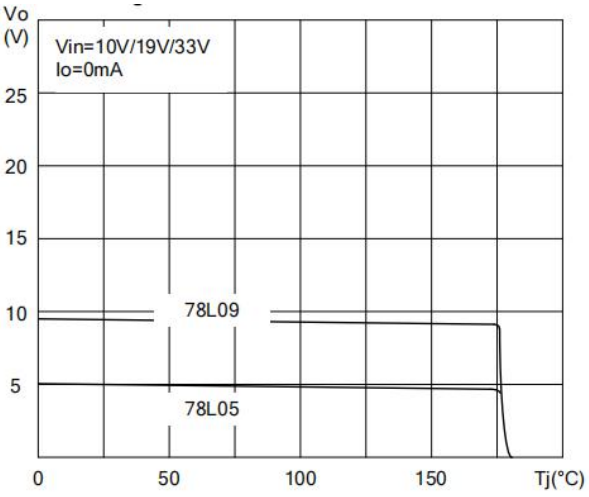
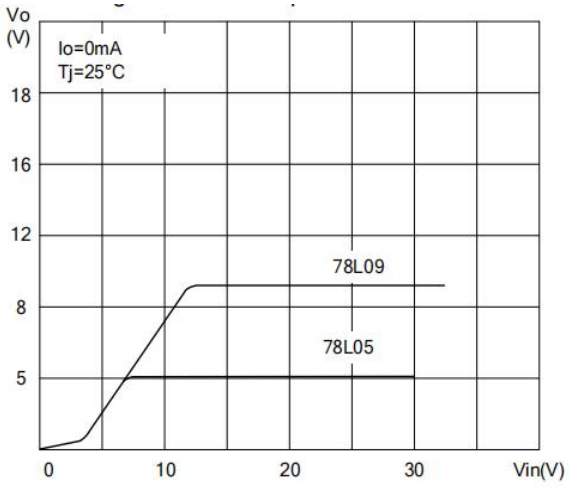
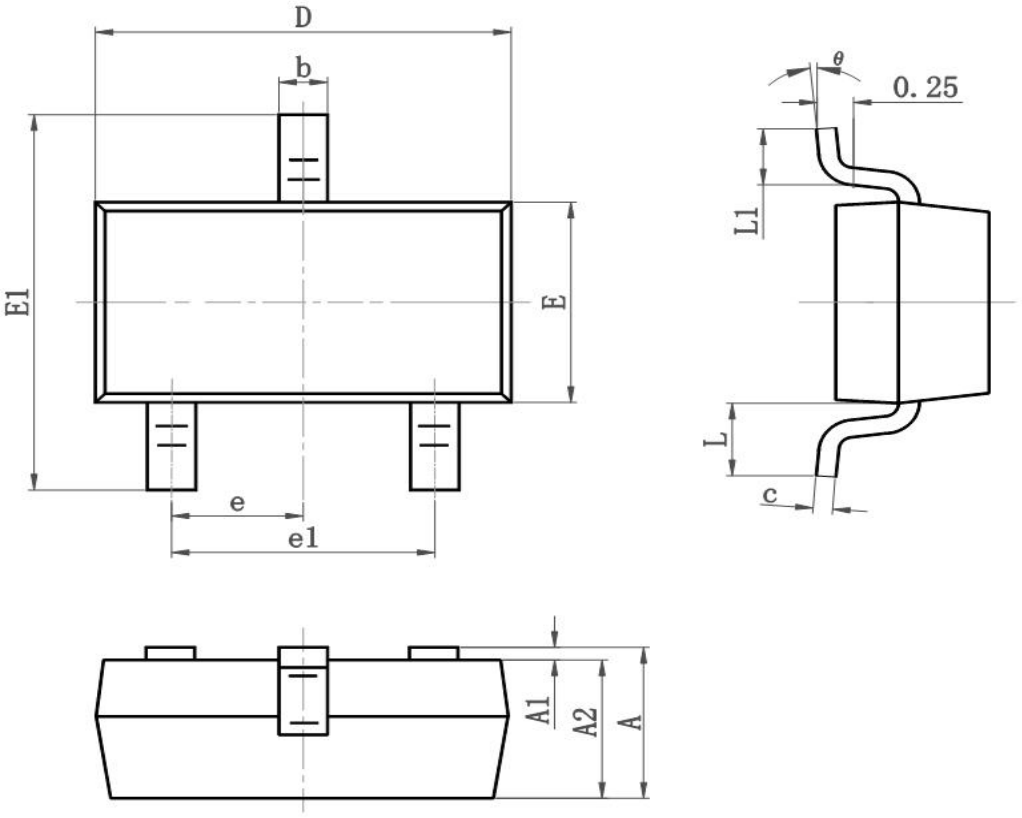


Fig.4 78L05/09 Output Characteristics



■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°