

SOT-23 Three Terminal Regulator 三端稳压 IC

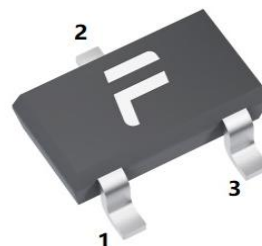
■Features 特点

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

Output Voltage 输出电压: 12V

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	40	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	-20~+120	$^{\circ}\text{C}$
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	125, -55to+150 $^{\circ}\text{C}$	

■Device Marking 产品字标

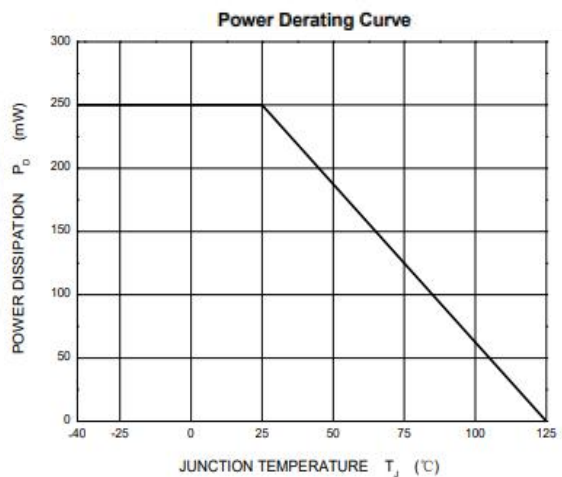
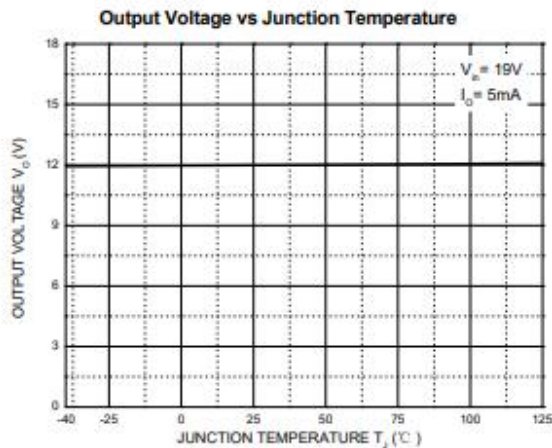
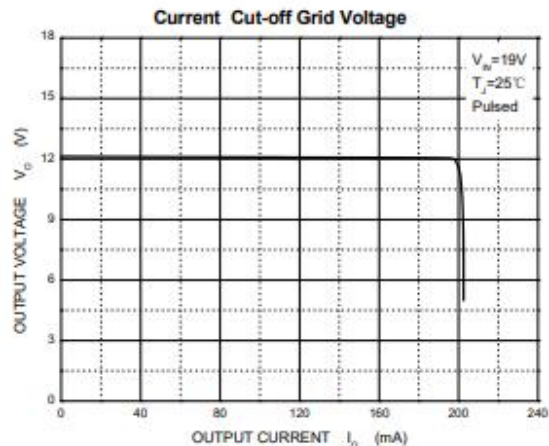
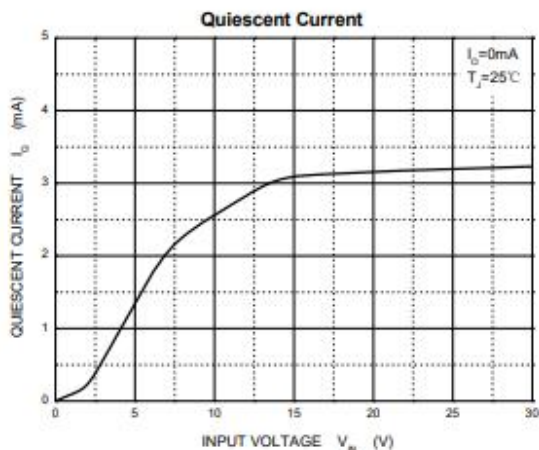
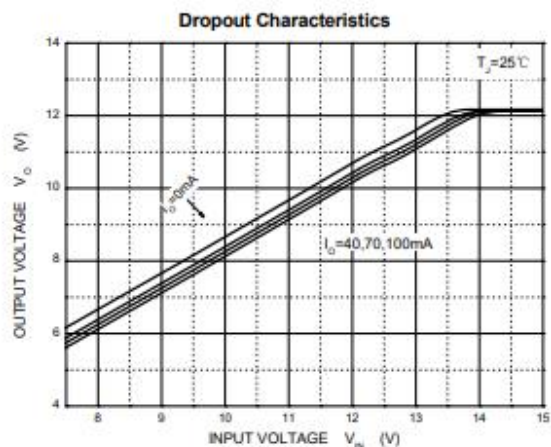
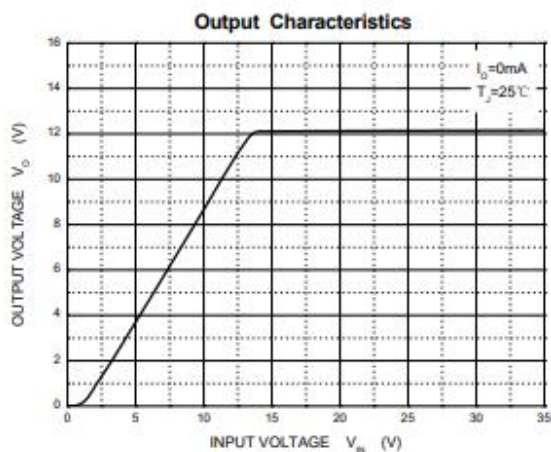
FSS78L12M=L12

■Electrical Characteristics 电特性

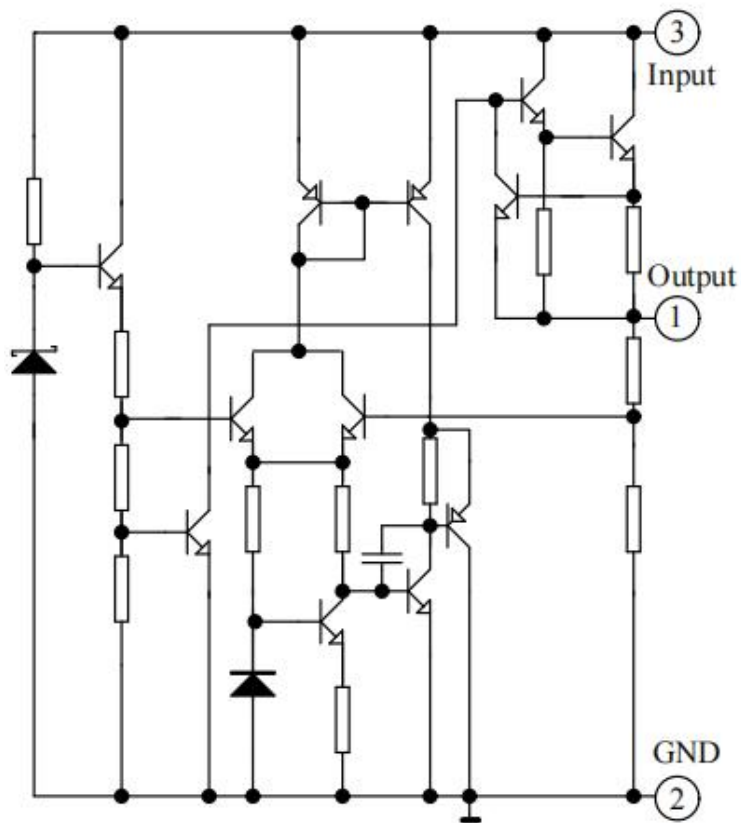
(Vi=19V Io=40mA Ci=0.33uF Co=0.1uF TA=25°C unless otherwise noted 如无特殊说明)

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=19V Io=40mA	11.5	12	12.5	V
Output Voltage 输出电压	Vo	14.5V≤Vi≤27V 1mA≤Io≤40mA	11.4		12.6	V
Output Voltage 输出电压	Vo	14.5V≤Vi≤27V 1mA≤Io≤70mA	11.4		12.6	V
Output Current 输出电流	Io	Vi=19V		100		mA
Dropout Voltage 落差电压	VD	Io=40mA		1.7		V
Quiescent Current 静态电流	Iq	Vi=19V Io=0		2	6	mA
Quiescent Current Change 静态电流变化	ΔIq	16V≤Vi≤27V			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 14.5V≤Vi≤27V		25	300	mV
Line Regulation 线性调整	ΔVo	Io=40mA 16V≤Vi≤27V		20	250	mV
Load Regulation 负载调整	ΔVo	1mA≤Io≤100mA Vi=19V		25	150	mV
Load Regulation 负载调整	ΔVo	1mA≤Io≤40mA Vi=19V		12	75	mV
Temperature Coefficient of Vo 输出电压温度系数	ΔVo/ΔT	Io=5mA		-1.0		mV/°C
Output Noise Voltage 噪声电压	VN	10Hz≤f≤100kHz		80		μV
Ripple Rejection 纹波抑制	RR	15V≤Vi≤25V f=120Hz	37	65		dB

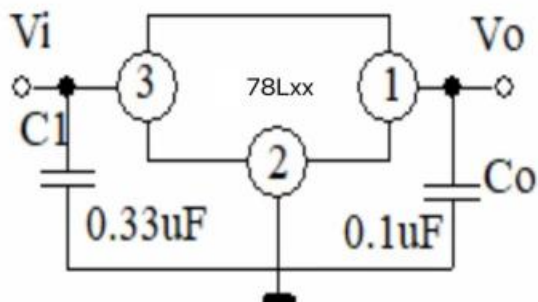
■ Typical Characteristic Curve 典型特性曲线



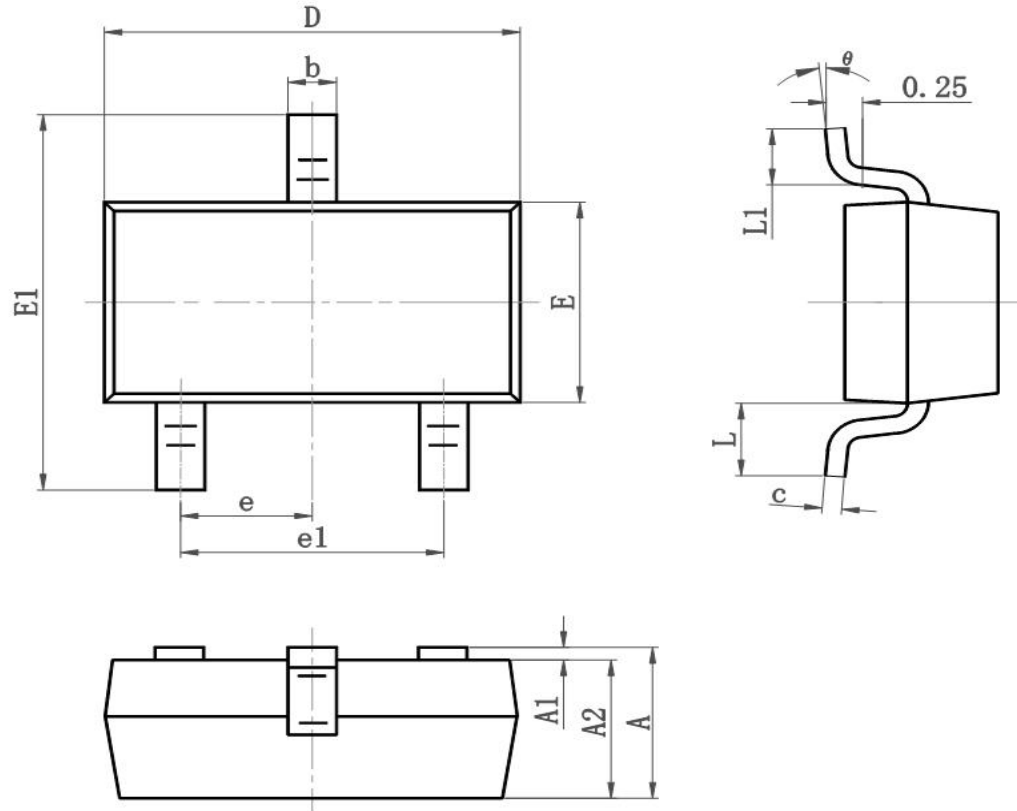
■Equivalent Circuit 等效电路



■Application Circuit 应用电路



■ 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°