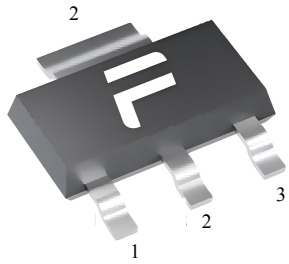
SOT-223 Three Terminal Regulator 三端稳压 IC



▪Features 特点

Pin 脚位：1.ADJ 调整　2.Output 输出　3.Input 输入

Output Voltage 输出电压：1.25V

Output Current 输出电流：1A

▪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	15	V
Operating Current 工作电流	I_O	1000	mA
Power dissipation 耗散功率	P_D	Internally Limited	mW
Solder Temperature 焊接温度/时间	Td	300	℃
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}	-65to+150℃	
Minimum ESD Rating (HBM) 最低 ESD 等级	V_{ESD}	2	V

▪Electrical Characteristics 电特性

(Refer to the test circuits, T_J=25℃ C_O=10μF unless otherwise specified。)

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	I_O=10mA	1.238	1.25	1.265	V
Output Voltage 输出电压	V_O	V_I-V_O=1.5-3.75V I_O=10mA-1A	1.219	1.25	1.281	V
Dropout Voltage 落差电压	V_D	I_O=100mA I_O=500mA I_O=1000mA			1.1 1.2 1.3	V
Quiescent Current 静态电流	I_q	V_I-V_O=5V			10	mA
Load Regulation 负载调整率	L_{DR}				0.2%	
Line Regulation 线性调整	ΔV_O	I_O=10mA V_I-V_O=1.5-3.75V			0.2%	
Line Regulation 线性调整	ΔV_O	I_O=10mA-1A V_I-V_O=2V			0.4%	
Supply Voltage Rejection 电源抑制比	SVR	V_I-V_O=3V I_O=40mA f=12Hz T_J=25℃	60			dB
Adjustment Pin Current 调整脚电流	I_{ADJ}	V_I-V_O=1.5-12V I_O=100mA			120	μA
Adjustment Pin Current Change 调整脚电流变化	ΔI_{ADJ}	V_I-V_O=1.5-12V I_O=100mA-1A			5	μA

▪Typical Applicationa 典型应用

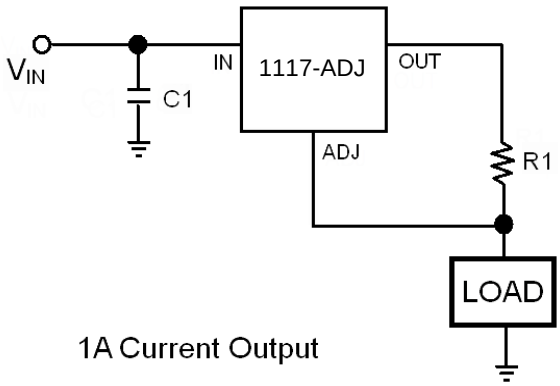


Figure 1

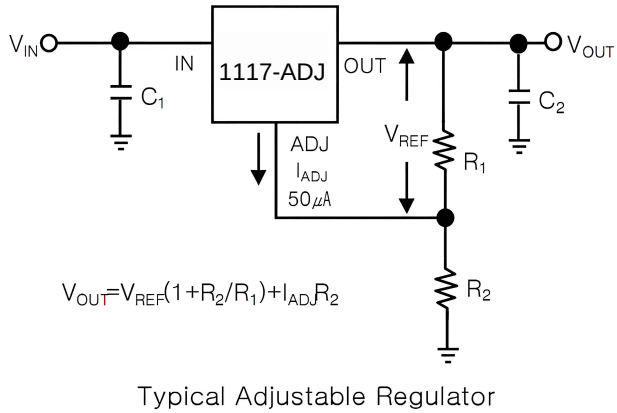


Figure 2

▪Typical Characteristic Curve 典型特性曲线

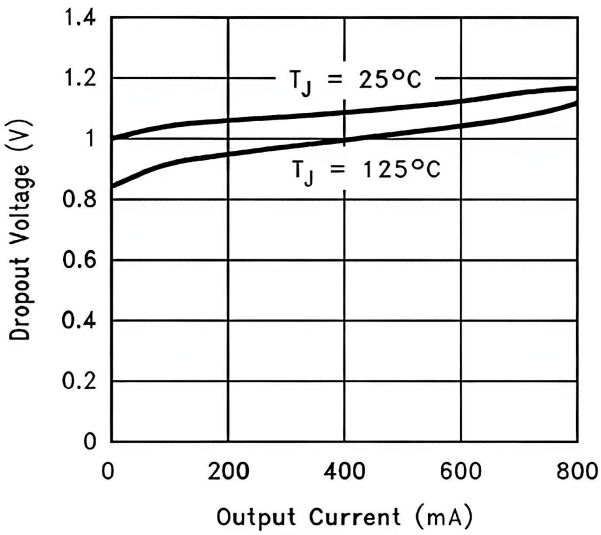


Figure 3. Dropout Voltage

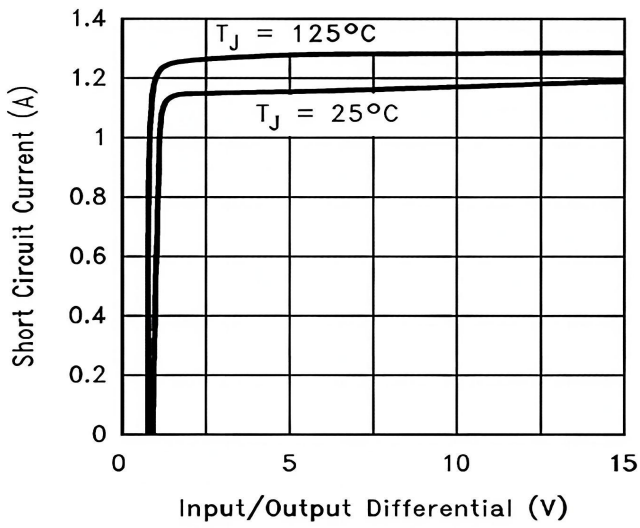


Figure 4. Short-Circuit Current

▪Typical Characteristic Curve 典型特性曲线

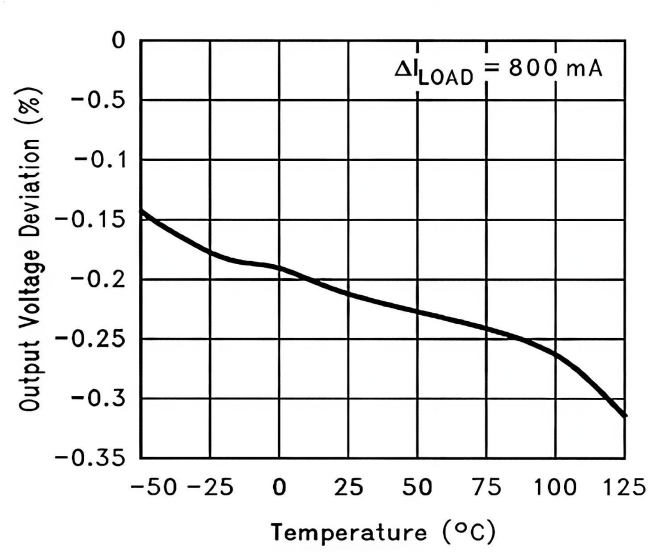


Figure 5. Load Regulation

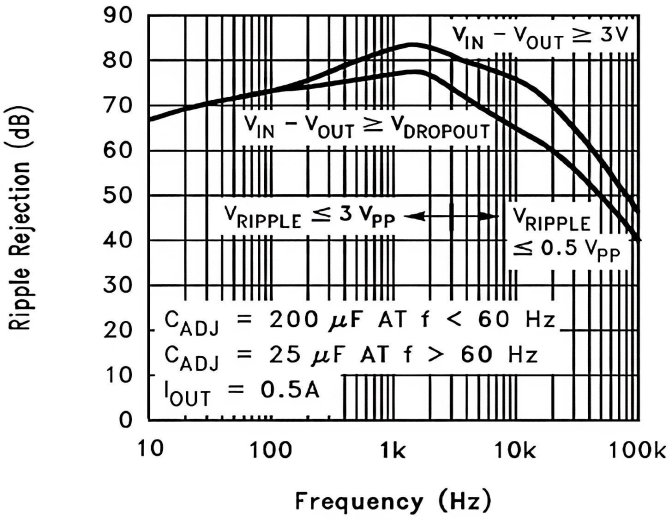


Figure 6. Ripple Rejection

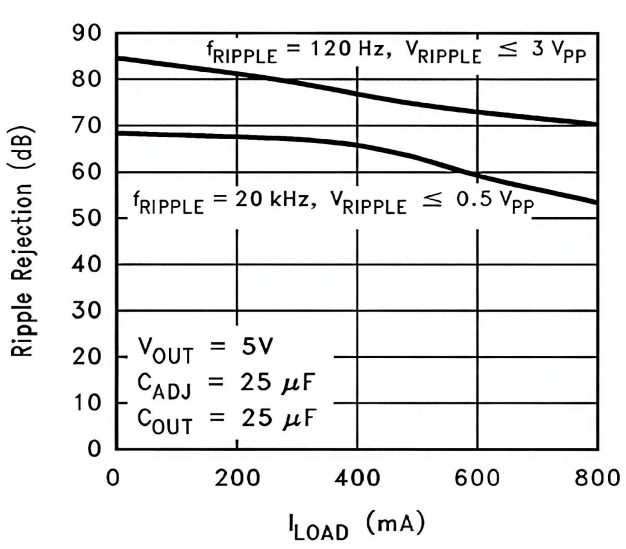


Figure 7. Ripple Rejection vs Current

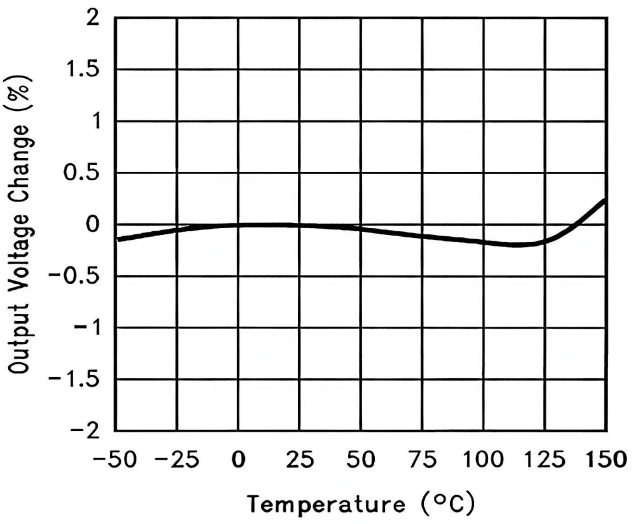
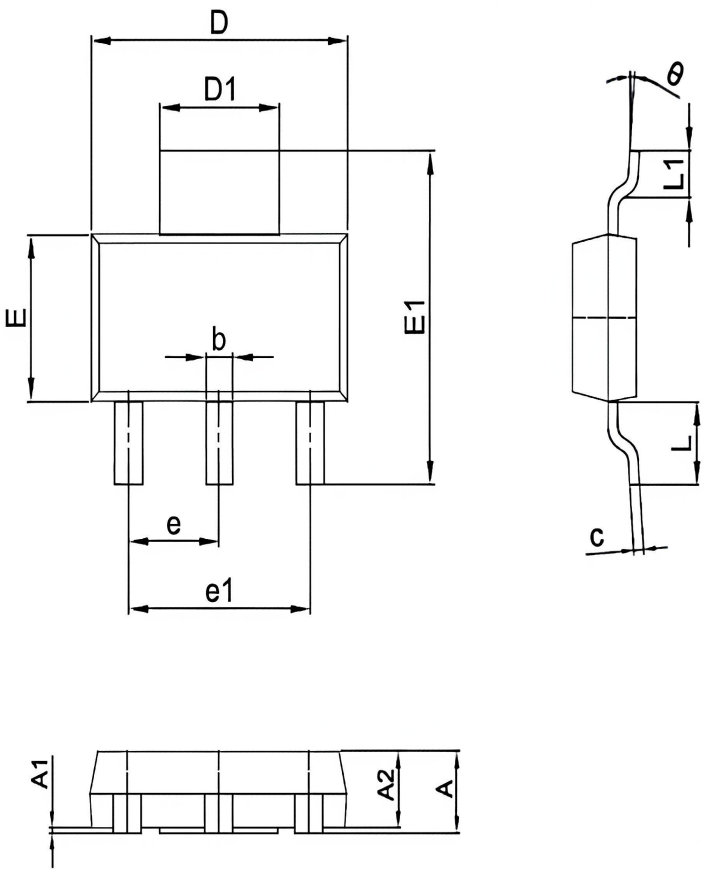


Figure 8. Temperature Stability

▪ SOT-223 Dimension 外形封装尺寸



Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.00	0.10	0.000	0.004
A2	1.50	1.70	0.059	0.067
b	0.65	0.75	0.026	0.030
c	0.20	0.30	0.008	0.012
D	6.40	6.60	0.252	0.260
D1	2.90	3.10	0.114	0.122
E	3.30	3.70	0.130	0.146
E1	6.85	7.15	0.270	0.281
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	1.65	1.85	0.065	0.073
L1	0.90	1.15	0.035	0.045