

SOT-89-3L LDO High Input Voltage Three Terminal Regulator 低落差高电压三端稳压 IC

■Features 特点

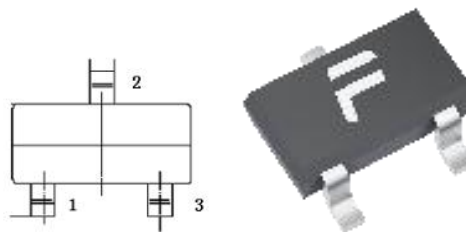
1.GND 2.Vi 3.Vo

Low Dropout Voltage 低落差电压: Type 典型值 0.1V

Low Quiescent Current 低静态电流: < 3μA

High Input Voltage 高输入电压: Up to 高达 30V

High Precision Output Voltage 高精度输出电压: ±3%



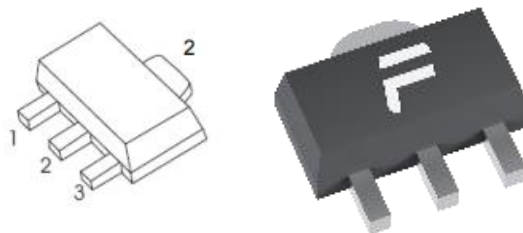
■Application 应用

Battery Power Supply Equipment 电池供电设备

Communication Equipment 通信设备

Audio/Video Equipment 音视频设备

Monitor Equipment 监控设备



■Absolute Maximum Ratings 最大额定值

(TA=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	30	V
Operating Current 工作电流	I_o	100	mA
Power dissipation 耗散功率	P_D	400	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	306	℃/W
Solder Temperature/Time 焊接温度/时间	T_d	260/10	℃/S
Operating Ambient Temperature 工作温度	T_A	-25~+70	℃
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	-50to+125℃	

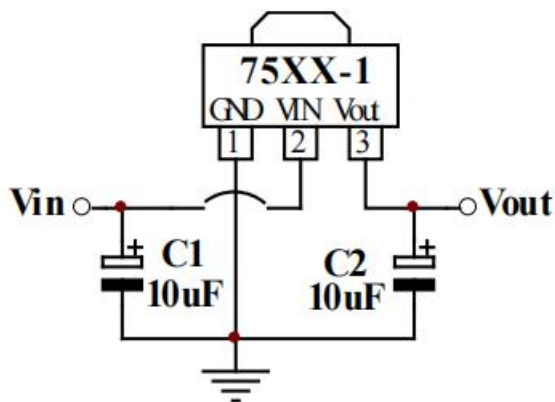
■Electrical Characteristics 电特性

HT7550 ($T_{opt}=25^{\circ}\text{C}$)

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	$I_O=10\text{mA}$ $V_I=7\text{V}$	4.85	5	5.15	V
Output Current 输出电流	I_O	$V_I=7\text{V}$	60	100		mA
Dropout Voltage 落差电压	V_D	$I_O=1\text{mA}$		100		mV
Quiescent Current 静态电流	I_q	$I_O=0$		2	3	μA
Line Regulation 线性调整	$\Delta V_O/\Delta V_i \cdot V_O$	$I_O=1\text{mA}$ $6 \leq V_I \leq 24$		0.2		%/V
Load Regulation 负载调整	ΔV_O	$1\text{mA} \leq I_O \leq 20\text{mA}$ $V_I=7\text{V}$		100	150	mV
Temperature Finger 温度系数	$\Delta V_O/\Delta T_a$	$I_O=10\text{mA}$ $V_I=7\text{V}$ $0^{\circ}\text{C} \leq T_a \leq 70^{\circ}\text{C}$		± 0.75		$\text{mV}/^{\circ}\text{C}$

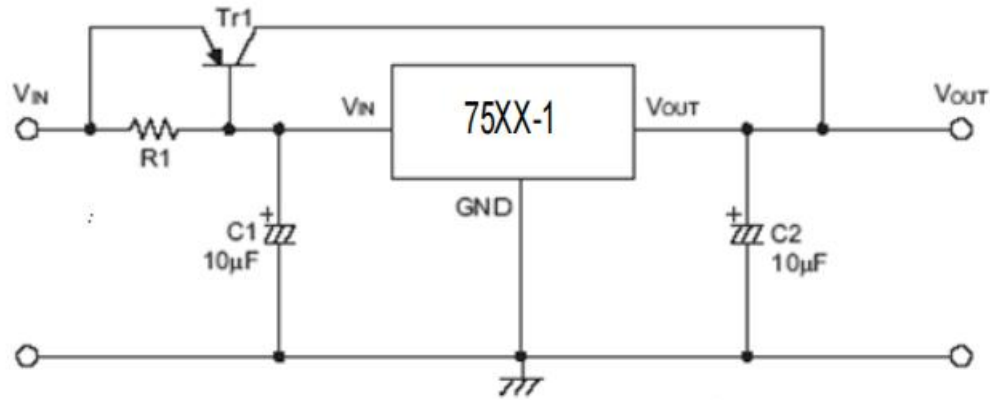
■Application Circuit 应用电路

Basic Circuit 基本电路

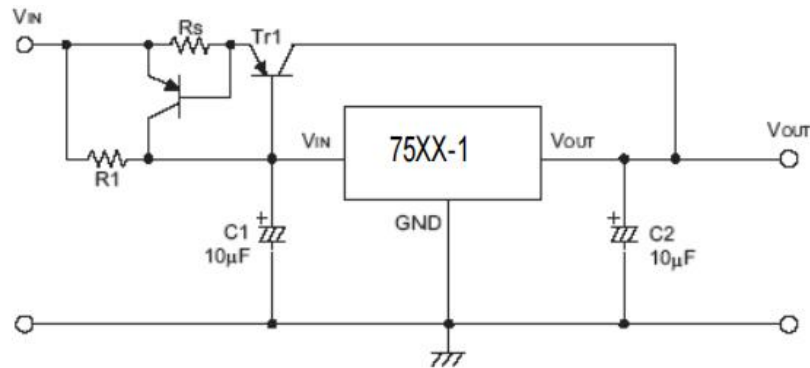


■ Application Circuit 应用电路

High Output Current Regulator Circuit 高输出电流稳压电路

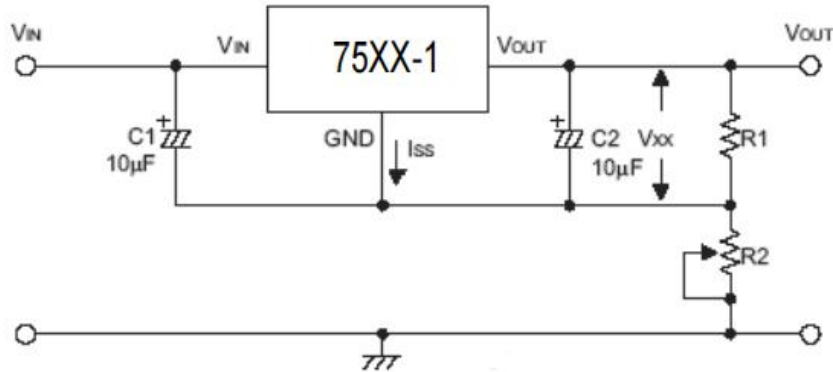


Shortage Protection Circuit 短路保护电路

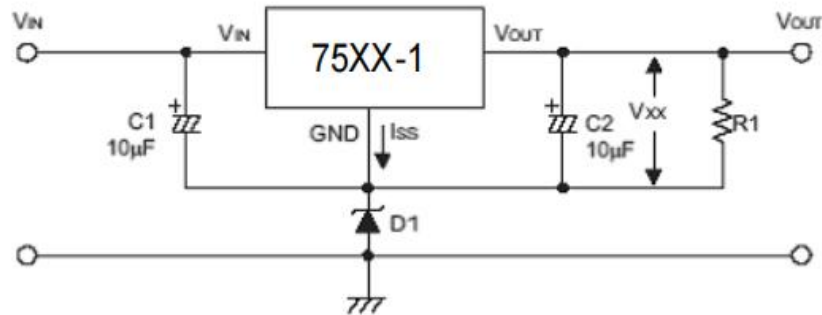


■ Application Circuit 应用电路

High Output Voltage Circuit 高输出电压电路 $V_{OUT}=V_{XX}(1+R2/R1)+I_q \cdot R2$

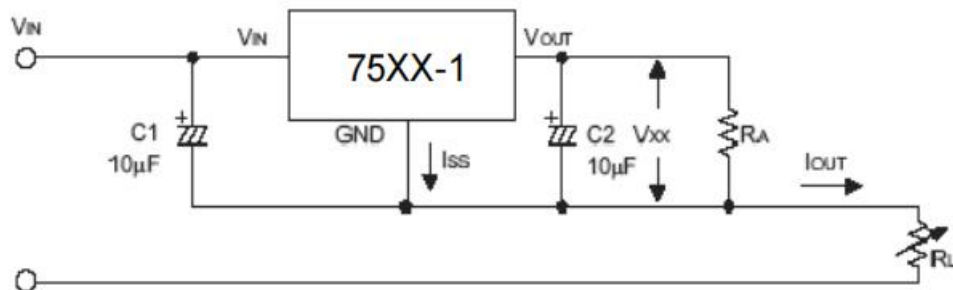


High Output Voltage Circuit 高输出电压电路 $V_{OUT}=V_{XX}+V_{D1}$

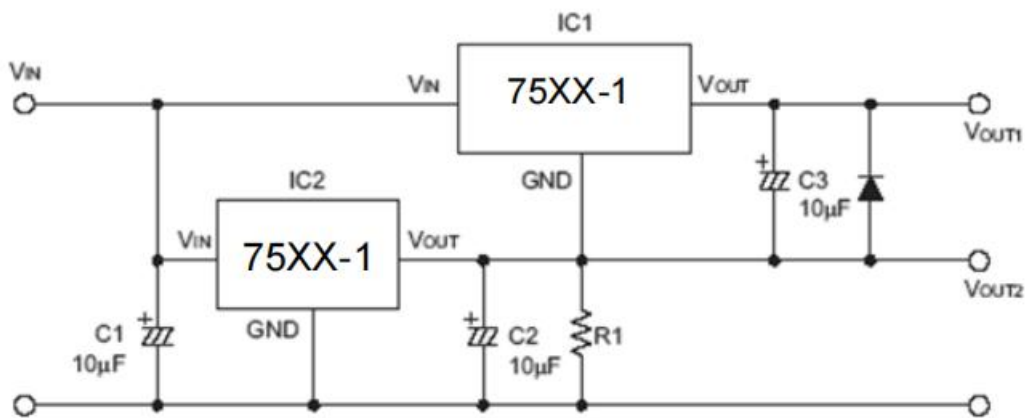


■ Application Circuit 应用电路

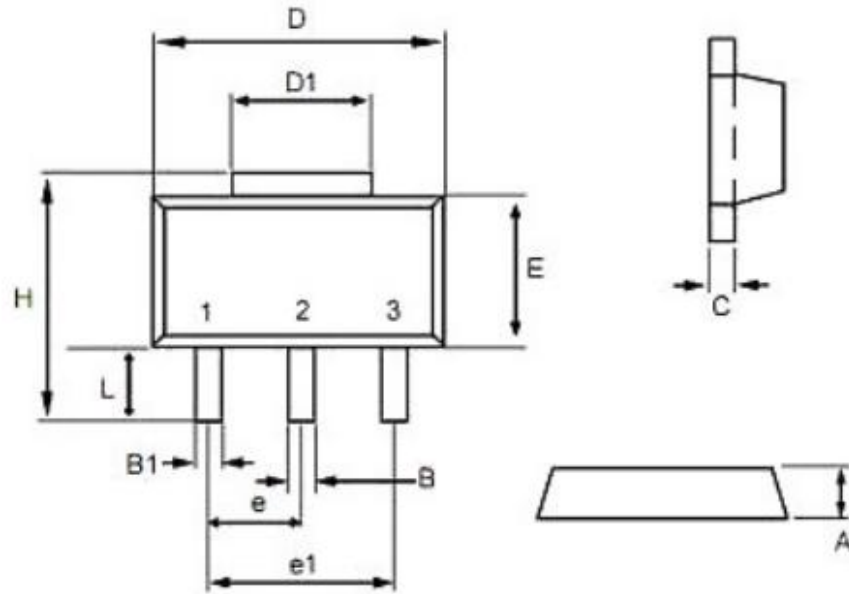
Current Adjustment Circuit 电流调节电路 $I_{OUT} = V_{XX}/R_X + I_q$



Dual Output Circuit 双端输出电路



■ SOT-89-3L 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