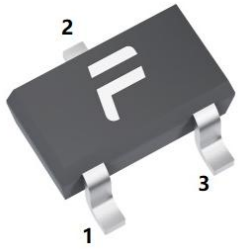
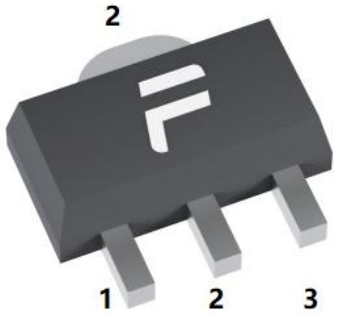
SOT-23-3L SOT-89-3L LDO High Input Voltage Three Terminal Regulator
低落差高耐压三端稳压 IC





■Features 特点

1.Vo 2.GND 3.Vi
Low Dropout Voltage 低落差电压：< 0.3V
Low Quiescent Current 低静态电流： 1.5μA
High Input Voltage 高输入电压(耐压)：Up to 高达 24V
High Precision Output Voltage 高精度输出电压：±2%
具过温保护、过流和短路保护功能

■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

(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 Limit 输入电压极限	V_i	24	V
Operating Current 工作电流	I_O	300	mA
Power dissipation 耗散功率	P_D(SOT-23-3L SOT-89-3L)	200 500	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\Theta JA}$(SOT-23-3L SOT-89-3L)	625 250	℃/W
Solder Temperature/Time 焊接温度/时间	Td	260/10	℃/S
Operating Ambient Temperature 工作温度	T_A	-40~+85	℃
Junction and Storage Temperature 结温和储藏温度	T_J,T_{stg}	-50to+125℃	

■Electrical Characteristics 电特性

FS(S)7330R(M) (T_{opt}=25℃)

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 V_I=5V	2.94	3	3.06	V
Output Current 输出电流	I_O	V_I=5V	300			mA
Dropout Voltage 落差电压	V_D	I_O=100mA ΔV_O=2%		210	300	mV
Quiescent Current 静态电流	I_q	I_O=0		1.5	3	μA
Line Regulation 线性调整	$\Delta V_O/\Delta V_i*V_O$	I_O=1mA 4≤V_I≤20			0.2	%/V
Output Short Current 输出短路电流	I_{lim}	V_O=0V		400		mA
Temperature Finger 温度系数	$\Delta V_O/\Delta Ta*V_O$	I_O=10mA V_I=5V -40℃≤Ta≤85℃		±100		ppm/℃

FS(S)7333R(M) (T_{opt}=25℃)

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 V_I=5.3V	3.234	3.3	3.366	V
Output Current 输出电流	I_O	V_I=5.3V	300			mA
Dropout Voltage 落差电压	V_D	I_O=100mA ΔV_O=2%		195	300	mV
Quiescent Current 静态电流	I_q	I_O=0		1.5	3	μA
Line Regulation 线性调整	$\Delta V_O/\Delta V_i*V_O$	I_O=1mA 4.3≤V_I≤20		0.2		%/V
Load Regulation 负载调整	ΔV_O	1mA≤I_O≤300mA V_I=5.5V		37	100	mV
Output Short Current 输出短路电流	I_{lim}	V_O=0V		400		mA
Temperature Finger 温度系数	$\Delta V_O/\Delta Ta*V_O$	I_O=10mA V_I=5.3V -40℃≤Ta≤85℃		±100		ppm/℃

■Electrical Characteristics 电特性

FS(S)7336R(M) (T_{opt}=25℃)

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 V_I=5.6V	3.528	3.6	3.672	V
Output Current 输出电流	I_O	V_I=5.6V	300			mA
Dropout Voltage 落差电压	V_D	I_O=100mA ΔV_O=2%		180	300	mV
Quiescent Current 静态电流	I_q	I_O=0		1.5	3	μA
Line Regulation 线性调整	$\Delta V_O/\Delta V_i*V_O$	I_O=1mA 4.6≤V_I≤20		0.2		%/V
Load Regulation 负载调整	ΔV_O	1mA≤I_O≤300mA V_I=5.6V		37	100	mV
Output Short Current 输出短路电流	I_{lim}	V_O=0V		400		mA
Temperature Finger 温度系数	$\Delta V_O/\Delta Ta*V_O$	I_O=10mA V_I=5.6V -40℃≤Ta≤85℃		±100		ppm/℃

FS(S)7340R(M) (T_{opt}=25℃)

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 V_I=6V	3.92	4	4.08	V
Output Current 输出电流	I_O	V_I=6V	300			mA
Dropout Voltage 落差电压	V_D	I_O=100mA ΔV_O=2%		170	300	mV
Quiescent Current 静态电流	I_q	I_O=0		1.5	3	μA
Line Regulation 线性调整	$\Delta V_O/\Delta V_i*V_O$	I_O=1mA 5≤V_I≤20		0.2		%/V
Load Regulation 负载调整	ΔV_O	1mA≤I_O≤300mA V_I=6V		37	100	mV
Output Short Current 输出短路电流	I_{lim}	V_O=0V		400		mA
Temperature Finger 温度系数	$\Delta V_O/\Delta Ta*V_O$	I_O=10mA V_I=6V -40℃≤Ta≤85℃		±100		ppm/℃

■Electrical Characteristics 电特性

FS(S)7344R(M) (T_{opt}=25℃)

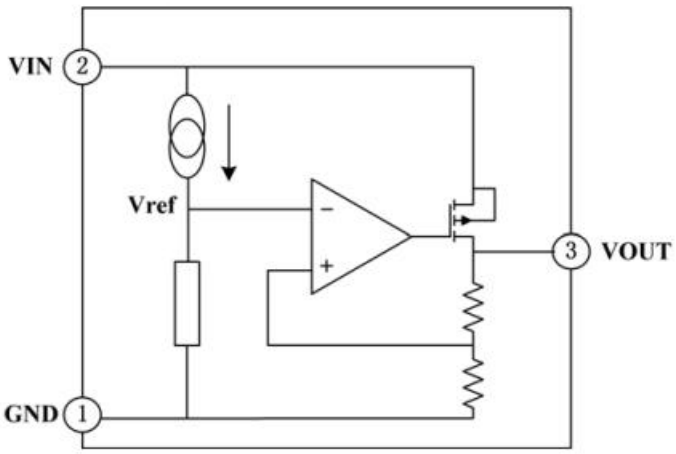
Characteristic 特性参数	Symbol 符号	Test Condition 测试条件	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Output Voltage 输出电压	V_O	I_O=10mA V_I=6.4V	4.312	4.4	4.488	V
Output Current 输出电流	I_O	V_I=6.4V	300			mA
Dropout Voltage 落差电压	V_D	I_O=100mA ΔV_O=2%		160	300	mV
Quiescent Current 静态电流	I_q	I_O=0		1.5	3	μA
Line Regulation 线性调整	$\Delta V_O/\Delta V_i*V_O$	I_O=1mA 5.4≤V_I≤20		0.2		%/V
Load Regulation 负载调整	ΔV_O	1mA≤I_O≤300mA V_I=6.4V		37	100	mV
Output Short Current 输出短路电流	I_{lim}	V_O=0V		400		mA
Temperature Finger 温度系数	$\Delta V_O/\Delta Ta*V_O$	I_O=10mA V_I=6.4V -40℃≤Ta≤85℃		±100		ppm/℃

FS(S)7350R(M) (T_{opt}=25℃)

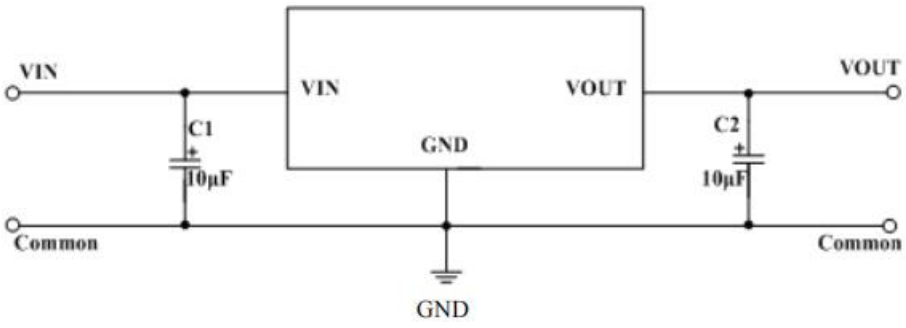
Characteristic 特性参数	Symbol 符号	Test Condition 测试条件	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Output Voltage 输出电压	V_O	I_O=10mA V_I=7V	4.9	5	5.1	V
Output Current 输出电流	I_O	V_I=7V	300			mA
Dropout Voltage 落差电压	V_D	I_O=100mA ΔV_O=2%		150	300	mV
Quiescent Current 静态电流	I_q	I_O=0		1.5	3	μA
Line Regulation 线性调整	$\Delta V_O/\Delta V_i*V_O$	I_O=1mA 6≤V_I≤20		0.2		%/V
Load Regulation 负载调整	ΔV_O	1mA≤I_O≤300mA V_I=7V		37	100	mV
Output Short Current 输出短路电流	I_{lim}	V_O=0V		400		mA
Temperature Finger 温度系数	$\Delta V_O/\Delta Ta*V_O$	I_O=10mA V_I=7V -40℃≤Ta≤85℃		±100		ppm/℃

■Application Circuit 应用电路

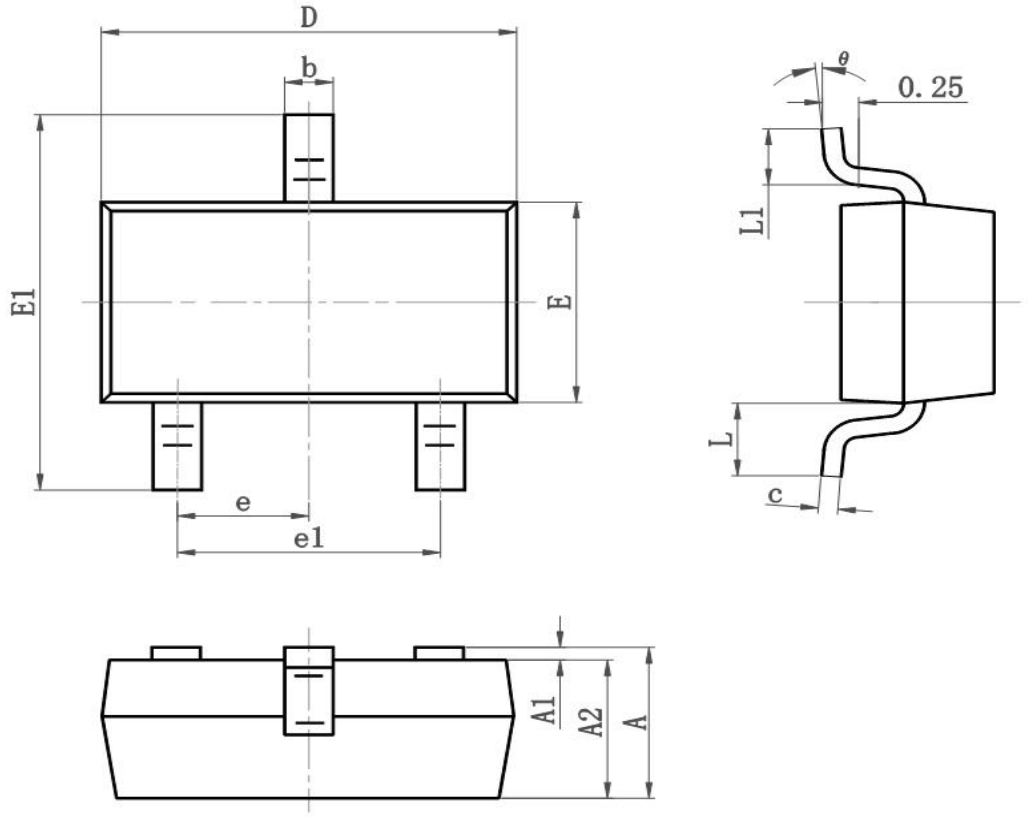
Block Circuit 电路框图



Basic Circuit 基本电路

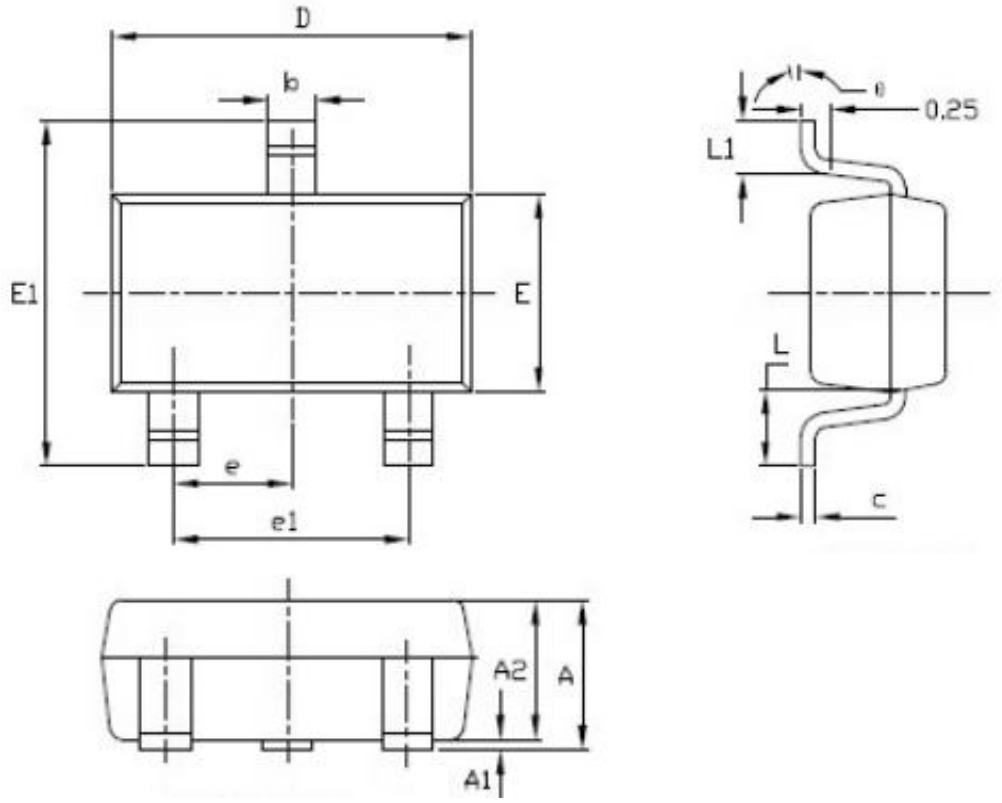


■SOT-23 Dimension 外形封装尺寸



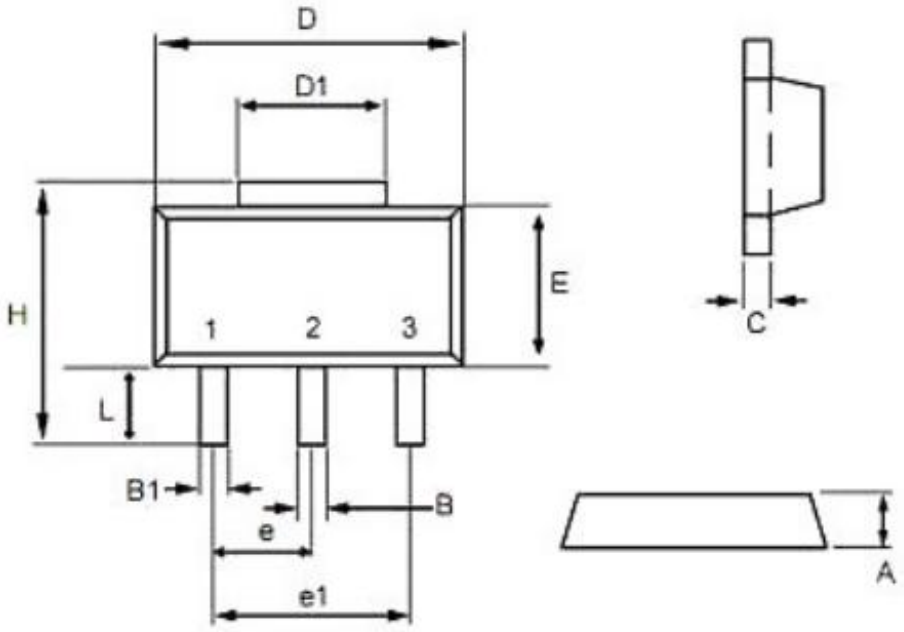
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.050	0.055
E1	2.250	2.550	0.089	0.100
e	0.900	1.00	0.035	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°

■SOT-23-3L Dimension 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.900	1.00	0.035	0.039
e1	1.800	2.000	0.071	0.079
L	0.450	0.650	0.018	0.026
L1	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

■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