



■ 产品简介

AMS1117 是一款低压差的线性稳压器。

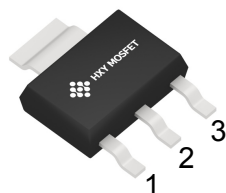
■ 产品特点

- 包括三端可调输出和固定电压输出版本（固定电压包括 1.2V, 1.8V, 2.5V, 3.3V, 5.0V 等，其他电压规格可根据用户定制）
- 最大输出电流为 1A
- 输出电压精度高达 $\pm 2\%$
- 稳定工作电压范围为高达 12V
- 电压线性度为 0.2%
- 负载线性度为 0.4%
- 环境温度：T_A 的范围是 0°C~125°C

■ 产品用途

- 计算机主板、显卡
- LCD 监视器及 LCD TV
- DVD 解码板
- ADSL 等设备
- 开关电源的后级稳压

■ 封装形式和管脚定义功能



SOT-223

引脚定义：

引脚号	符号	定义
1	GND	接地脚
2	Vout	输出端
3	Vin	输入端

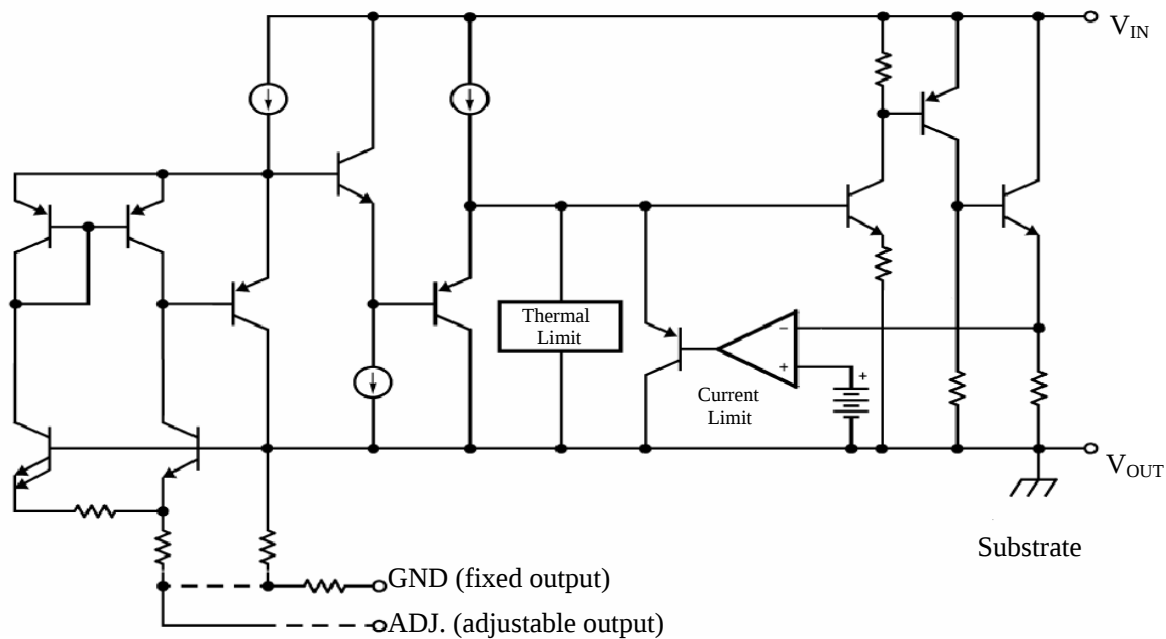
固定电
压型

引脚号	符号	定义
1	Adj.	可调端
2	Vout	输出端
3	Vin	输入端

可调电
压型



功能框图



极限参数

参 数 名 称	符 号	数 值	单 位
最大输入电压	V _{in}	18	V
最大结温	T _J	125	°C
最大环境温度	T _A	125	°C
贮存温度	T _S	-65~ +150	°C
焊接温度和时间		300°C,10S	

推荐工作条件:

名称	最小	推荐	最大	单位
输入电压范围			15	V
工作环境温度	0		125	°C



■ 主要参数和工作特性:

参数	参数说明	条件	最小值	典型值	最大值	单位
Vref	参考电压	I _{out} =10mA, V _{in} -V _{out} =2V 10mA≤I _{out} ≤1A, 1.5V≤V _{in} -V _{out} ≤10V	1.225	1.25	1.275	V
Vout	输出电压	AMS1117-1.2 10mA≤I _{out} ≤1A, 3.0V≤V _{in} ≤10V	1.176	1.2	1.224	V
		AMS1117-1.5 10mA≤I _{out} ≤1A, 3.0V≤V _{in} ≤10V	1.470	1.5	1.530	V
		AMS1117-1.8 10mA≤I _{out} ≤1A, 3.25V≤V _{in} ≤10V	1.764	1.80	1.836	V
		AMS1117-2.5 10mA≤I _{out} ≤1A, 3.9V≤V _{in} ≤10V	2.45	2.50	2.55	V
		AMS1117-3.3 10mA≤I _{out} ≤1A, 5.3V≤V _{in} ≤12V	3.235	3.3	3.365	V
		AMS1117-5.0 10mA≤I _{out} ≤1A, 6.5V≤V _{in} ≤12V	4.9	5	5.1	V
ΔVout	电压线性度	AMS1117-ADJ I _{out} =10mA, V≤V _{in} -V _{out} ≤10V		5	18	mV
		AMS1117-1.2 I _{out} =10mA, 2.45V≤V _{in} ≤10V		5	18	mV
		AMS1117-1.5 I _{out} =10mA, 2.75V≤V _{in} ≤10V		5	18	mV
		AMS1117-1.8 I _{out} =10mA, 3.25V≤V _{in} ≤10V		5	18	mV
		AMS1117-2.5 I _{out} =10mA, 3.9V≤V _{in} ≤10V		5	18	mV
		AMS1117-3.3 I _{out} =10mA, 5.3V≤V _{in} ≤12V		9	18	mV
		AMS1117-5.0 I _{out} =10mA, 6.5V≤V _{in} ≤12V		9	18	mV

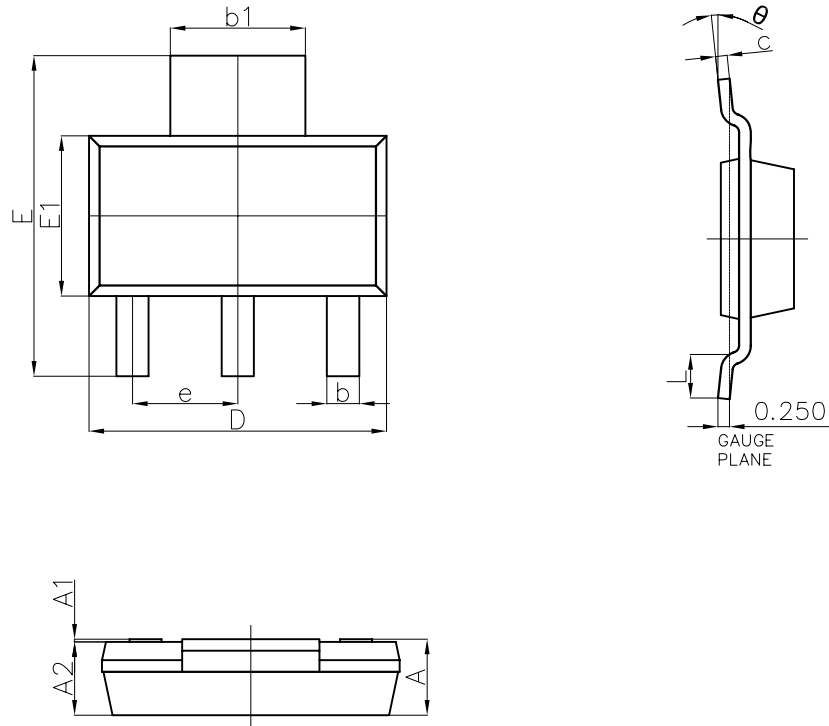


■ 主要参数和工作特性:

ΔV_{out}	负载线性度	AMS1117-ADJ $V_{in} = 3.25V, 10mA \leq I_{out} \leq 1A$		9	18	mV
		AMS1117-1.2 $V_{in} = 2.95V, 10mA \leq I_{out} \leq 1A$		9	18	mV
		AMS1117-1.5 $V_{in} = 3.25V, 10mA \leq I_{out} \leq 1A$		9	18	mV
		AMS1117-1.8 $V_{in} = 3.25V, 10mA \leq I_{out} \leq 1A$		10	18	mV
		AMS1117-2.5 $V_{in} = 4.5V, 10mA \leq I_{out} \leq 1A$		10	18	mV
		AMS1117-3.3 $V_{in} = 5.3V, 0 \leq I_{out} \leq 1A$		12	20	mV
		AMS1117-5.0 $V_{in} = 6.5V, 0 \leq I_{out} \leq 1A$		12	20	mV
$V_{in}-V_{out}$	最小输入输出电压差	$\Delta V_{out}, \Delta V_{ref}=1\%, I_{out}=1A$			1.4	V
I_{limit}	最小负载电流	AMS1117-ADJ			10	mA
I_q	静态电流	AMS1117-ADJ $V_{in} = 4.0V$			12	mA
		AMS1117-1.2, $V_{in} = 4.8V$			12	mA
		AMS1117-1.5, $V_{in} = 4.8V$			12	mA
		AMS1117-1.8, $V_{in} = 4.8V$			12	mA
		AMS1117-2.5, $V_{in} = 4.8V$			12	mA
		AMS1117-3.3, $V_{in} = 4.8V$			12	mA
		AMS1117-5.0, $V_{in} = 4.8V$			12	mA



SOT-223 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	—	1.800	—	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	6.700	7.300	0.264	0.287
E1	3.300	3.700	0.130	0.146
e	2.300(BSC)		0.091(BSC)	
L	0.750	—	0.030	—
θ	0°	10°	0°	10°



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