

概述:

AMS1117 是一款低压差的线性稳压器。

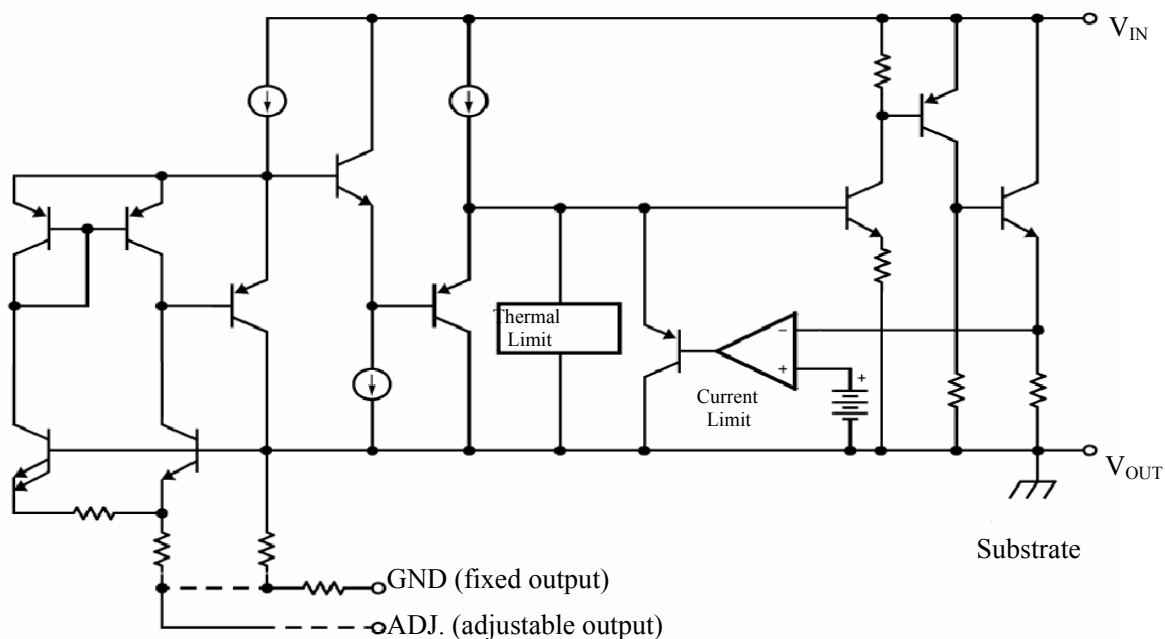
特点:

- 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, 5V 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 $-20^{\circ}\text{C} \sim 125^{\circ}\text{C}$

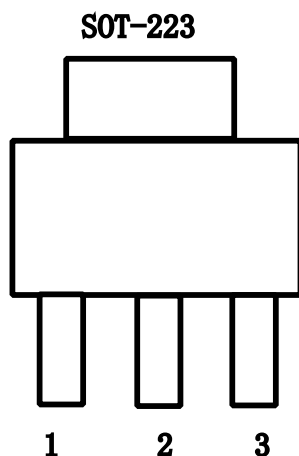
用途:

- 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

功能图:



引脚排列图:



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

极限值:

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	-20		125	°C

主要参数和工作特性:

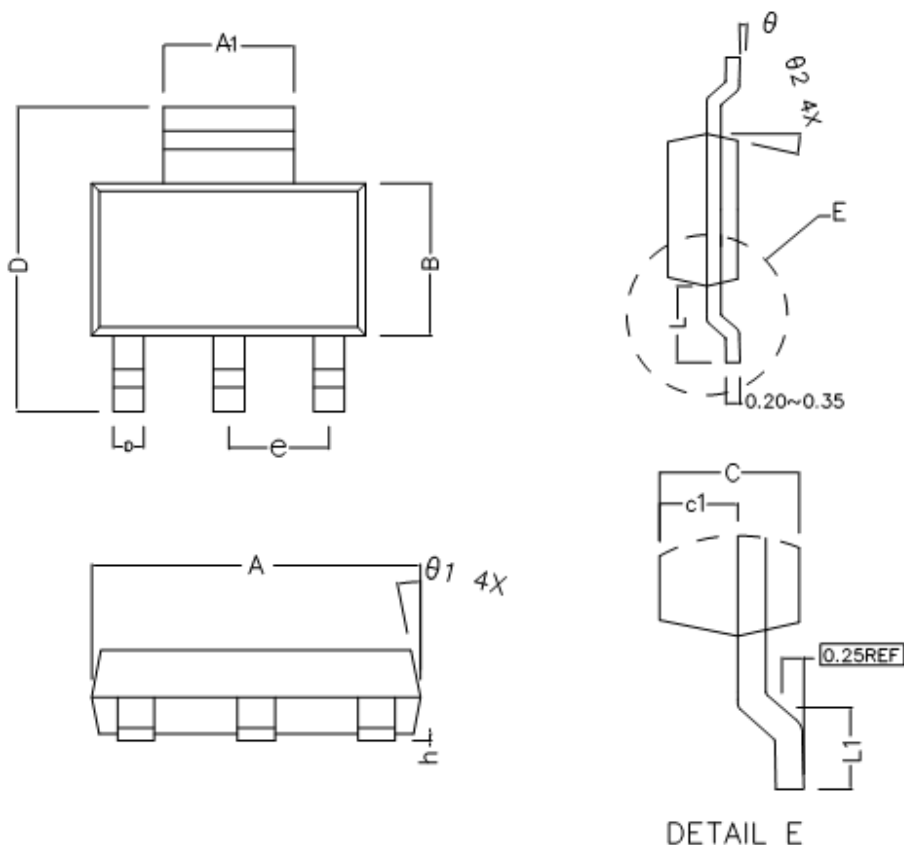
T_j=25℃

参数	参数说明	条件	最小值	典型值	最大值	单位
V _{ref}	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
V _{out}	输出电压	AMS1117-1.20V 10mA≤I _{out} ≤1A, 2.7V≤V _{in} ≤10V	1.176	1.2	1.224	V
		AMS1117-1.50V 10mA≤I _{out} ≤1A, 3.0V≤V _{in} ≤10V	1.47	1.5	1.53	V
		AMS1117-1.80V 10mA≤I _{out} ≤1A, 3.25V≤V _{in} ≤10V	1.764	1.80	1.836	V
		AMS1117-2.50V 10mA≤I _{out} ≤1A, 3.9 V≤V _{in} ≤10V	2.45	2.50	2.55	V
		AMS1117-3.3V 10mA≤I _{out} ≤1A, 5.3 V≤V _{in} ≤12V	3.235	3.3	3.365	V
		AMS1117-5V 10mA≤I _{out} ≤1A, 6.5V≤V _{in} ≤12V	4.9	5	5.1	V
ΔV _{out}	电压线性度	AMS1117-ADJ I _{out} =10mA, V≤V _{in} -V _{out} ≤10V		5	18	mV
		AMS1117-1.2V I _{out} =10mA, 2.7V≤V _{in} ≤10V		5	18	mV
		AMS1117-1.5V I _{out} =10mA, 2.75V≤V _{in} ≤10V		5	18	mV
		AMS1117-1.8V I _{out} =10mA, 3.25V≤V _{in} ≤10V		5	18	mV
		AMS1117-2.50V I _{out} =10mA, 3.9 V≤V _{in} ≤10V		5	18	mV
		AMS1117-3.3V I _{out} =10mA, 5.3 V≤V _{in} ≤12V		9	18	mV
		AMS1117-5V I _{out} =10mA, 6.5V≤V _{in} ≤12V		9	18	mV
ΔV _{out}	负载线性度	AMS1117-ADJ V _{in} = 3.25V, 10mA≤I _{out} ≤1A		9	18	mV
		AMS1117-1.2V V _{in} = 2.7 V, 10mA≤I _{out} ≤1A		9	18	mV
		AMS1117-1.5V V _{in} = 3.25V, 10mA≤I _{out} ≤1A		9	18	mV

主要参数和工作特性:

		AMS1117-1.8V $V_{in} = 3.25V, 10mA \leq I_{out} \leq 1A$		10	18	mV
		AMS1117-2.5V $V_{in} = 4.5V, 10mA \leq I_{out} \leq 1A$		10	18	mV
		AMS1117-3.3V $V_{in} = 5.3V, 0 \leq I_{out} \leq 1A$		12	20	mV
		AMS1117-5V $V_{in} = 6.5V, 0 \leq I_{out} \leq 1A$		12	20	mV
Vin-Vout	最小输入输出电压差	$\Delta V_{out}, \Delta V_{ref} = 1\%, I_{out} = 1A$			1.4	V
Ilimit	最小负载电流	AMS1117-ADJ			10	mA
Iq	静态电流	AMS1117-ADJ $V_{in} = 4.0V$			12	mA
		AMS1117-1.2V, $V_{in} = 4.8V$			12	mA
		AMS1117-1.5V, $V_{in} = 4.8V$			12	mA
		AMS1117-1.8V, $V_{in} = 4.8V$			12	mA
		AMS1117-2.5V, $V_{in} = 4.8V$			12	mA
		AMS1117-3.3V, $V_{in} = 4.8V$			12	mA
		AMS1117-5.0V, $V_{in} = 4.8V$			12	mA

SOT-223 Package Outline Dimensions (Units: mm)



COMMON DIMENSIONS (UNITS OF MEASURE IS mm)			
	MIN	NORMAL	MAX
A	6.400	6.500	6.600
A1	2.900	3.000	3.100
B	3.400	3.500	3.600
C	1.550	1.600	1.650
C1	0.850	0.900	0.950
D	6.800	7.000	7.200
L	1.650	1.750	1.850
L1	0.900	1.000	1.150
b	0.660	0.740	0.820
h	0.020	0.050	0.100
e	2.300TYPE		
θ_1	13° TYPE		
θ_2	13° TYPE		
θ	0° ~ 8°		

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