

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

AMS1117-XX(MS)

产品规格手册

概述

AMS1117-XX(MS) 是一款低压差的线性稳压器。

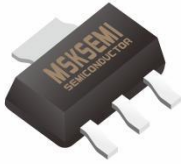
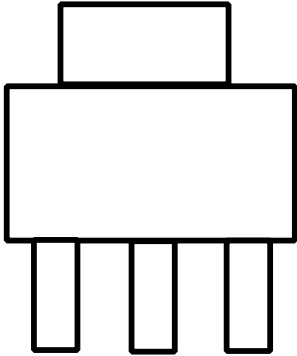
用途:

- 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

主要特点

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

封装形式及引脚定义

封装图	引脚排列
	
SOT-223	1 2 3

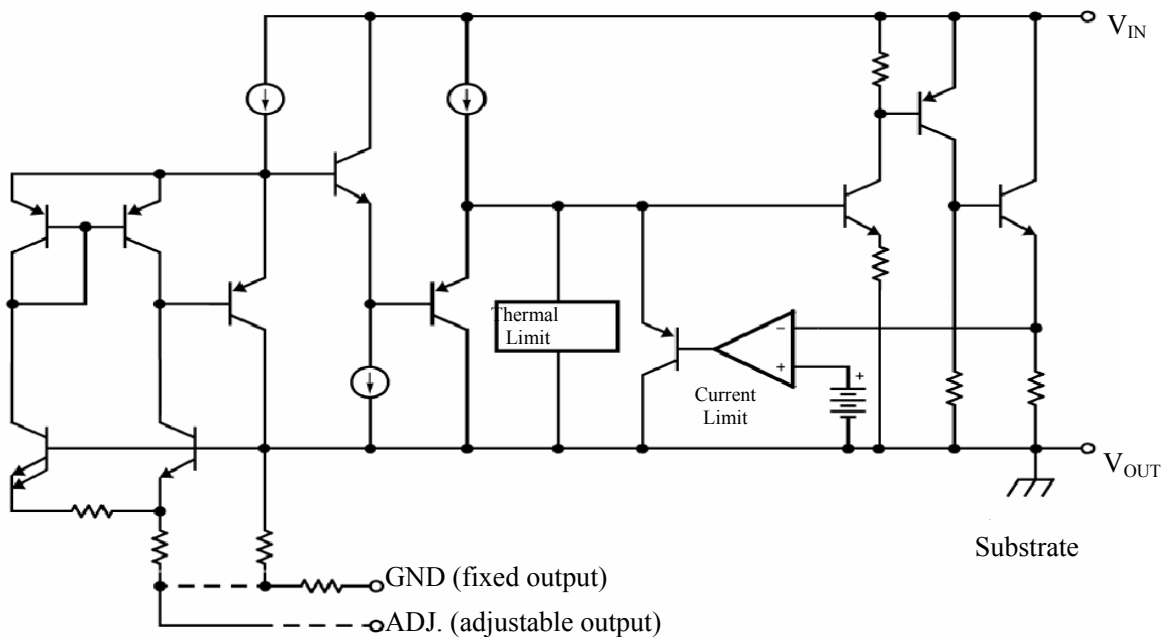
引脚号	符号	定义
1	GND	接地脚
2	Vout	输出端
3	Vin	输入端

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

功能图:



极限值

参数名称	符号	数值	单位
最大输入电压	Vin	18	V
最大节温	TJ	85	°C
最大环境温度	TA	125	°C
贮存温度	Ts	-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	Iout= 10 mA, Vin- Vout=2V 10mA≤Iout≤1A , 1.5V≤Vin- Vout ≤10V	1.225	1.25	1.275	V
Vout	输出电压	AMS1117-1.2(MS) 10mA≤Iout≤1A , 2.7V≤Vin≤10V	1.176	1.2	1.224	V
		AMS1117-1.5(MS) 10mA≤Iout≤1A , 3.0V≤Vin≤10V	1.47	1.5	1.53	V
		AMS1117-1.8(MS) 10mA≤Iout≤1A , 3.25 V≤Vin≤10V	1.764	1.80	1.836	V
		AMS1117-2.5(MS) 10mA≤Iout≤1A , 3.9 V≤Vin≤10V	2.45	2.50	2.55	V
		AMS1117-3.3(MS) 10mA≤Iout≤1A , 5.3 V≤Vin≤12V	3.235	3.3	3.365	V
		AMS1117-5.0(MS) 10mA≤Iout≤1A , 6.5V≤Vin≤12V	4.9	5	5.1	V

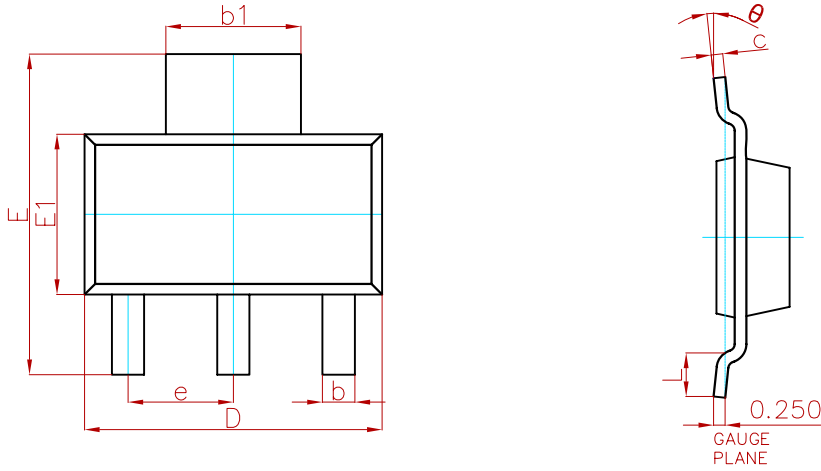
主要参数和工作特性:

Δ Vout	电压线性度	AMS1117-ADJ(MS) I _{out} =10mA, V _{in} -V _{out} ≤10V	5	18	V
		AMS1117- 1.2(MS) I _{out} =10mA, 2.7V≤V _{in} ≤10V	5	18	V
		AMS1117- 1.5(MS) I _{out} =10mA, 2.75V≤V _{in} ≤10V	5	18	V
		AMS1117- 1.8(MS) I _{out} =10mA, 3.25 V≤V _{in} ≤10V	5	18	V
		AMS1117-2.5(MS) I _{out} =10mA, 3.9 V≤V _{in} ≤10V	5	18	V
		AMS1117-3.3(MS) I _{out} =10mA, 5.3 V≤V _{in} ≤12V	9	18	V
		AMS1117-5(MS) I _{out} =10mA, 6.5V≤V _{in} ≤12V	9	18	V
Δ Vout	负载线性度	AMS1117-ADJ(MS) V _{in} = 3.25V, 10mA≤I _{out} ≤1A	9	18	V
		AMS1117- 1.2(MS) V _{in} = 2.7 V, 10mA≤I _{out} ≤1A	9	18	mV
		AMS1117- 1.5(MS) V _{in} = 3.25V, 10mA≤I _{out} ≤1A	9	18	mV

主要参数和工作特性:

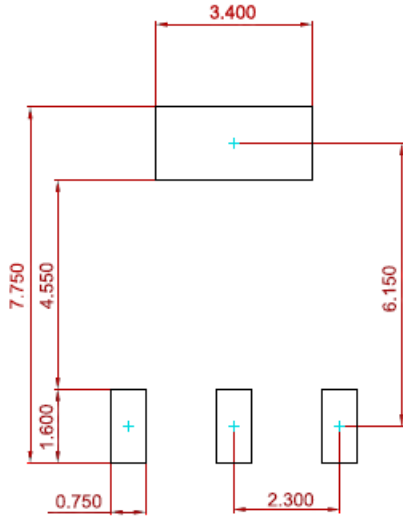
		AMS1117-1.8(MS) Vin = 3.25V, 10mA≤Iout≤1A		10	18	mV
		AMS1117-2.5(MS) Vin = 4.5 V, 10mA≤Iout≤1A		10	18	mV
		AMS1117-3.3(MS) Vin=5.3V, 0≤Iout≤1A		12	20	mV
		AMS1117-5.0(MS) Vin=6.5V, 0≤Iout≤1A		12	20	mV
Vin-Vout	最小输入输出电压差	ΔVout, ΔVref,=1%, Iout=1A			1.4	V
Ilimit	最小负载电流	AMS1117-ADJ(MS)			10	mA
Iq	静态电流	AMS1117-ADJ(MS) Vin = 4.0V			12	A
		AMS1117-1.2(MS), Vin = 4.8V			12	A
		AMS1117-1.5(MS), Vin = 4.8V			12	A
		AMS1117-1.8(MS), Vin = 4.8V			12	mA
		AMS1117-2.5(MS), Vin = 4.8V			12	mA
		AMS1117-3.3(MS), Vin = 4.8V			12	mA
		AMS1117-5.0(MS), Vin = 4.8V			12	mA

包装数据



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°

焊盘布局



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.050\text{mm}$.
3. The pad layout is for reference purposes only.

卷轴规格

P/N	PKG	QTY
AMS1117-XX(MS)	SOT-223	2500

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