

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

**SPX1117M3-L-XXX/TR(MS)**

**Product specification**

## 概述

SPX1117M3-L-XXX/TR(MS) 是一款低压差的线性稳压器。

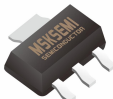
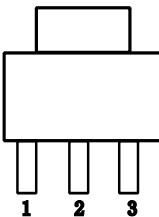


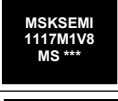



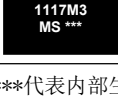
## 特点

- 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, 1.5V, 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 ±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°C ~ 125°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

## 包装和订单信息

产品编号	输出电压	封装		引脚排列	管体标记	最小包装 (PCS)
SPX1117M3-L-1-2/TR(MS)	1.2V	SOT-223				2500
SPX1117M3-L-1-5/TR(MS)	1.5V					2500
SPX1117M3-L-1-8/TR(MS)	1.8V					2500
SPX1117M3-L-2-5/TR(MS)	2.5V					2500
SPX1117M3-L-3-3/TR(MS)	3.3V					2500
SPX1117M3-L-5-0/TR(MS)	5.0V					2500
SPX1117M3-L/TR(MS)	ADJ					2500

注：\*\*\*代表内部生产批号

## 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

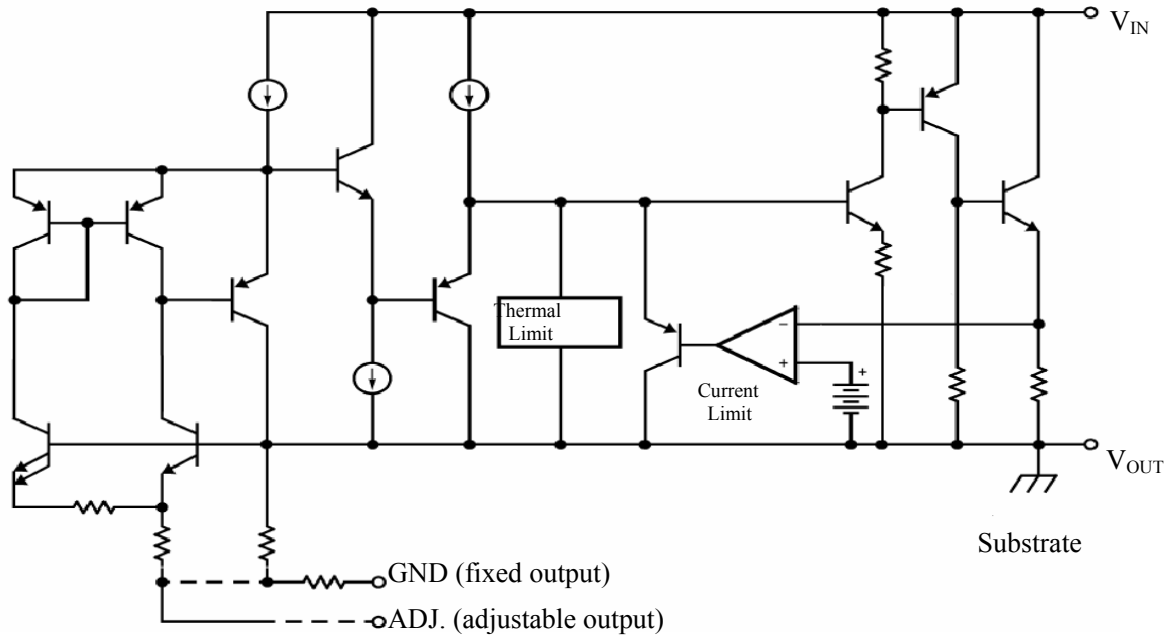
**极限值**

参数名称	符号	数值	单位
最大输入电压	V <sub>in</sub>	18	V
最大结温	T <sub>J</sub>	125	°C
最大环境温度	T <sub>A</sub>	125	°C
贮存温度	T <sub>s</sub>	-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

**功能图**



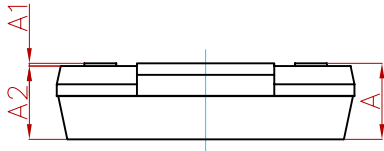
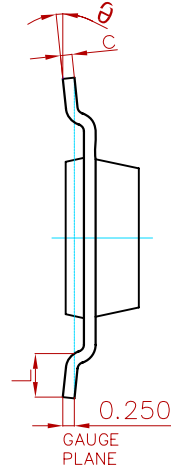
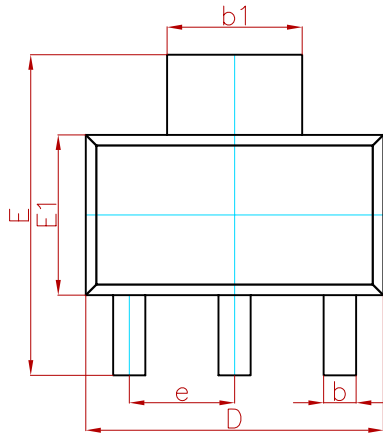
**主要参数和工作特性**
 $T_j=25^{\circ}\text{C}$ 

参数	参数说明	条件	最小值	典型值	最大值	单位
Vref	参考电压	$I_{out}=10\text{mA}$ , $V_{in}-V_{out}=2\text{V}$ $10\text{mA}\leq I_{out}\leq 1\text{A}$ , $1.5\text{V}\leq V_{in}-V_{out}\leq 10\text{V}$	1.225	1.25	1.275	V
Vout	输出电压	SPX1117M3-L-1-2/TR(MS) $10\text{mA}\leq I_{out}\leq 1\text{A}$ , $2.7\text{V}\leq V_{in}\leq 10\text{V}$	1.176	1.2	1.224	V
		SPX1117M3-L-1-5/TR(MS) $10\text{mA}\leq I_{out}\leq 1\text{A}$ , $3.0\text{V}\leq V_{in}\leq 10\text{V}$	1.47	1.5	1.53	V
		SPX1117M3-L-1-8/TR(MS) $10\text{mA}\leq I_{out}\leq 1\text{A}$ , $3.25\text{V}\leq V_{in}\leq 10\text{V}$	1.764	1.80	1.836	V
		SPX1117M3-L-2-5/TR(MS) $10\text{mA}\leq I_{out}\leq 1\text{A}$ , $3.9\text{V}\leq V_{in}\leq 10\text{V}$	2.45	2.50	2.55	V
		SPX1117M3-L-3-3/TR(MS) $10\text{mA}\leq I_{out}\leq 1\text{A}$ , $5.3\text{V}\leq V_{in}\leq 12\text{V}$	3.235	3.3	3.365	V
		SPX1117M3-L-5-0/TR(MS) $10\text{mA}\leq I_{out}\leq 1\text{A}$ , $6.5\text{V}\leq V_{in}\leq 12\text{V}$	4.9	5	5.1	V
$\Delta V_{out}$	电压线性度	SPX1117M3-L/TR(MS) $I_{out}=10\text{mA}$ , $V\leq V_{in}-V_{out}\leq 10\text{V}$		5	18	mV
		SPX1117M3-L-1-2/TR(MS) $I_{out}=10\text{mA}$ , $2.7\text{V}\leq V_{in}\leq 10\text{V}$		5	18	mV
		SPX1117M3-L-1-5/TR(MS) $I_{out}=10\text{mA}$ , $2.75\text{V}\leq V_{in}\leq 10\text{V}$		5	18	mV
		SPX1117M3-L-1-8/TR(MS) $I_{out}=10\text{mA}$ , $3.25\text{V}\leq V_{in}\leq 10\text{V}$		5	18	mV
		SPX1117M3-L-2-5/TR(MS) $I_{out}=10\text{mA}$ , $3.9\text{V}\leq V_{in}\leq 10\text{V}$		5	18	mV
		SPX1117M3-L-3-3/TR(MS) $I_{out}=10\text{mA}$ , $5.3\text{V}\leq V_{in}\leq 12\text{V}$		9	18	mV
$\Delta V_{out}$	负载线性度	SPX1117M3-L/TR(MS) $V_{in}=3.25\text{V}$ , $10\text{mA}\leq I_{out}\leq 1\text{A}$		9	18	mV
		SPX1117M3-L-1-2/TR(MS) $V_{in}=2.7\text{V}$ , $10\text{mA}\leq I_{out}\leq 1\text{A}$		9	18	mV
		SPX1117M3-L-1-5/TR(MS) $V_{in}=3.25\text{V}$ , $10\text{mA}\leq I_{out}\leq 1\text{A}$		9	18	mV

## 主要参数和工作特性

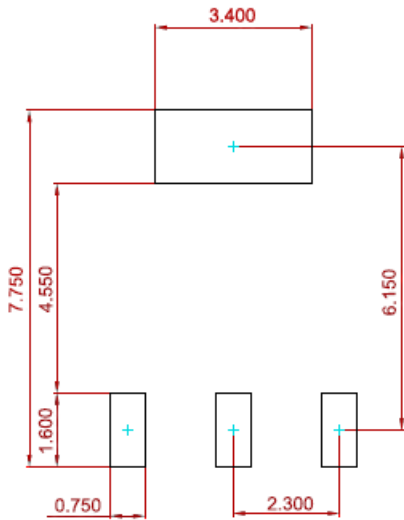
		SPX1117M3-L-1-8/TR(MS) Vin = 3.25V, 10mA ≤ Iout ≤ 1A		10	18	mV
		SPX1117M3-L-2-5/TR(MS) Vin = 4.5 V, 10mA ≤ Iout ≤ 1A		10	18	mV
		SPX1117M3-L-3-3/TR(MS) Vin=5.3V, 0 ≤ Iout ≤ 1A		12	20	mV
		SPX1117M3-L-5-0/TR(MS) Vin=6.5V, 0 ≤ Iout ≤ 1A		12	20	mV
Vin-Vout	最小输入输出电压差	ΔVout, ΔVref, =1%, Iout=1A			1.4	V
Ilimit	最小负载电流	SPX1117M3-L/TR(MS)			10	mA
Iq	静态电流	SPX1117M3-L/TR(MS) Vin = 4.0V			12	mA
		SPX1117M3-L-1-2/TR(MS) Vin = 4.8V			12	mA
		SPX1117M3-L-1-5/TR(MS), Vin = 4.8V			12	mA
		SPX1117M3-L-1-8/TR(MS), Vin = 4.8V			12	mA
		SPX1117M3-L-2-5/TR(MS), Vin = 4.8V			12	mA
		SPX1117M3-L-3-3/TR(MS), Vin = 4.8V			12	mA
		SPX1117M3-L-5-0/TR(MS), Vin = 4.8V			12	mA

**封装信息**



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
$b_1$	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	—
$\theta$	0°	10°	0°	10°

**焊盘布局建议**



**Note:**

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

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