

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

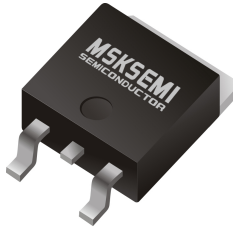
Product data sheet

概述:

AMS1117 C D 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±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 $-20^{\circ}\text{C} \sim 125^{\circ}\text{C}$

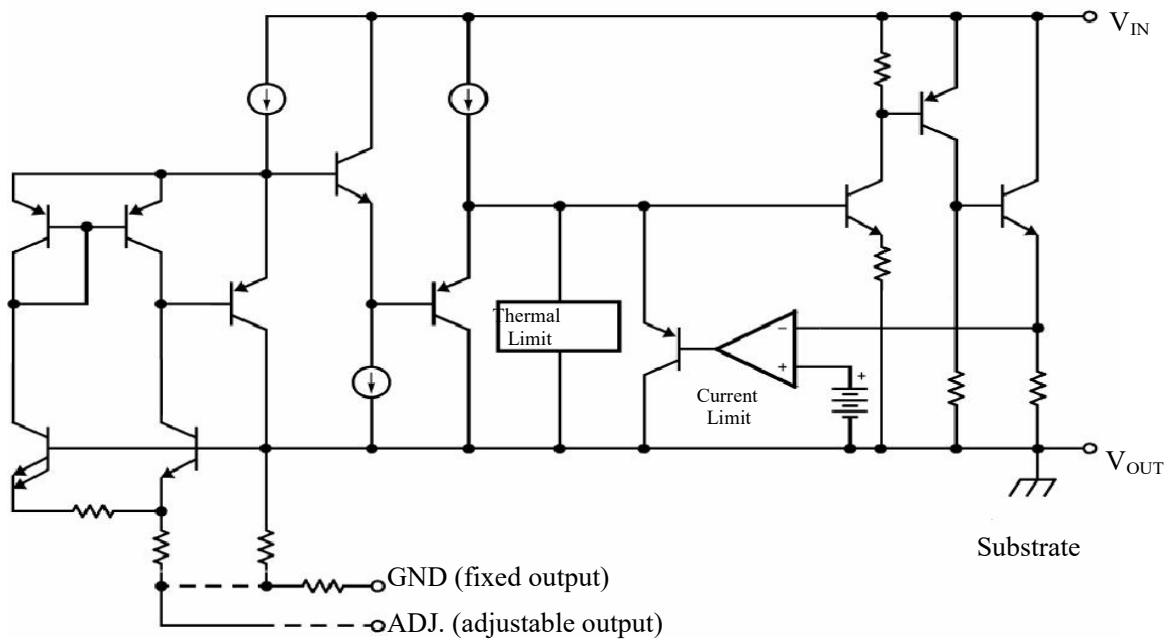


TO-252

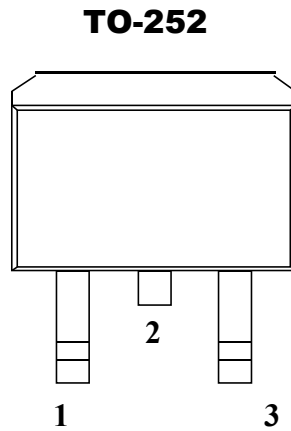
用途:

- 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	Vin	18	V
最大节温	TJ	125	°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			

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:

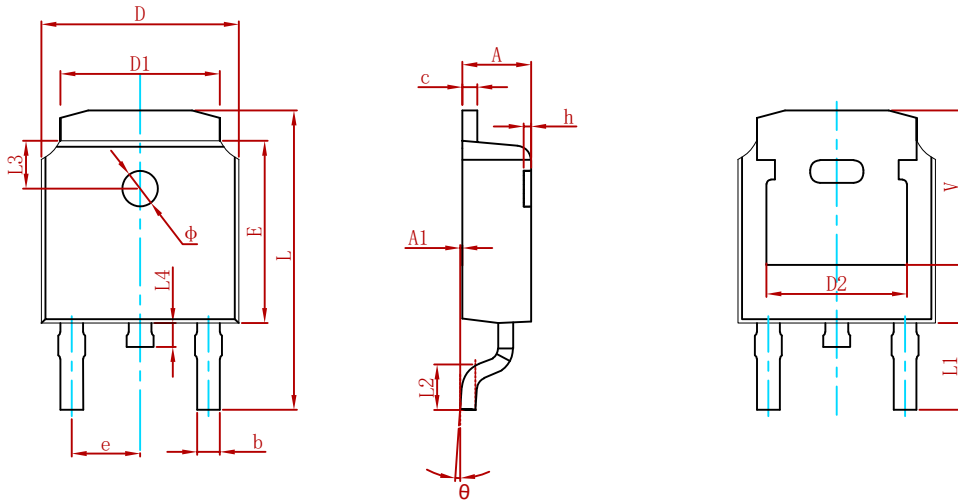
T_j=25°C

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	AMS1117CD-1.2 10mA ≤ I _{out} ≤ 1A, 2.7V ≤ V _{in} ≤ 10V	1.176	1.2	1.224	V
		AMS1117CD-1.5 10mA ≤ I _{out} ≤ 1A, 3.0V ≤ V _{in} ≤ 10V	1.47	1.5	1.53	V
		AMS1117CD-1.8 10mA ≤ I _{out} ≤ 1A, 3.25 V ≤ V _{in} ≤ 10V	1.764	1.80	1.836	V
		AMS1117CD-2.5 10mA ≤ I _{out} ≤ 1A, 3.9 V ≤ V _{in} ≤ 10V	2.45	2.50	2.55	V
		AMS1117CD-3.3 10mA ≤ I _{out} ≤ 1A, 5.3 V ≤ V _{in} ≤ 12V	3.235	3.3	3.365	V
		AMS1117CD-5.0 10mA ≤ I _{out} ≤ 1A, 6.5V ≤ V _{in} ≤ 12V	4.9	5	5.1	V
ΔV _{out}	电压线性度	AMS1117CD-ADJ I _{out} =10mA, V ≤ V _{in} -V _{out} ≤ 10V		5	18	mV
		AMS1117CD-1.2 I _{out} =10mA, 2.7V ≤ V _{in} ≤ 10V		5	18	mV
		AMS1117CD-1.5 I _{out} =10mA, 2.75V ≤ V _{in} ≤ 10V		5	18	mV
		AMS1117CD-1.8 I _{out} =10mA, 3.25 V ≤ V _{in} ≤ 10V		5	18	mV
		AMS1117CD-2.5 I _{out} =10mA, 3.9 V ≤ V _{in} ≤ 10V		5	18	mV
		AMS1117CD-3.3 I _{out} =10mA, 5.3 V ≤ V _{in} ≤ 12V		9	18	mV
ΔV _{out}	负载线性度	AMS1117CD-ADJ V _{in} = 3.25V, 10mA ≤ I _{out} ≤ 1A		9	18	mV
		AMS1117CD-1.2 V _{in} = 2.7 V, 10mA ≤ I _{out} ≤ 1A		9	18	mV
		AMS1117CD-1.5V V _{in} = 3.25V, 10mA ≤ I _{out} ≤ 1A		9	18	mV

主要参数和工作特性:

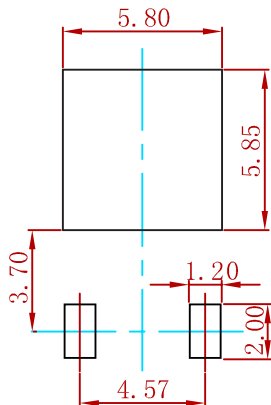
		AMS1117CD-1.8 $V_{in} = 3.25V, 10mA \leq I_{out} \leq 1A$		10	18	mV
		AMS1117CD-2.5 $V_{in} = 4.5V, 10mA \leq I_{out} \leq 1A$		10	18	mV
		AMS1117CD-3.3 $V_{in} = 5.3V, 0 \leq I_{out} \leq 1A$		12	20	mV
		AMS1117CD-5.0 $V_{in} = 6.5V, 0 \leq I_{out} \leq 1A$		12	20	mV
Vin-Vout	最小输入输出电压差	$\Delta V_{out}, \Delta V_{ref} = 1\%, I_{out} = 1A$			1.4	V
Ilimit	最小负载电流	AMS1117CD-ADJ			10	mA
Iq	静态电流	AMS1117CD-ADJ $V_{in} = 4.0V$			12	mA
		AMS1117CD-1.2, $V_{in} = 4.8V$			12	mA
		AMS1117CD-1.5, $V_{in} = 4.8V$			12	mA
		AMS1117CD-1.8, $V_{in} = 4.8V$			12	mA
		AMS1117CD-2.5, $V_{in} = 4.8V$			12	mA
		AMS1117CD-3.3, $V_{in} = 4.8V$			12	mA
		AMS1117CD-5.0, $V_{in} = 4.8V$			12	mA

PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.635	0.770	0.025	0.030
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.712	10.312	0.382	0.406
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.250 REF.		0.207 REF.	

Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05mm.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
AMS1117CD	TO-252	2500

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