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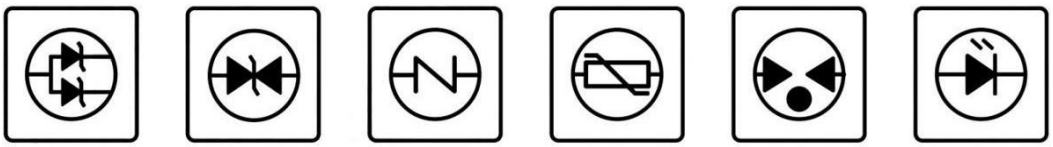
SEMICONDUCTOR



XC6206PXXXPR-MS

Product specification

描述

XC6206PXXXPR-MS 系列是高纹波抑制率、低功耗、低压差，具有过流和短路保护的 CMOS 降压型电压稳压器。这些器件具有很低的静态偏置电流（8.0μATyp.），它们能在输入、输出电压差极小的情况下提供 250mA 的输出电流，并且仍能保持良好的调整率。由于输入输出间的电压差很小和静态偏置电流很小，这些器件特别适用于希望延长电池寿命的电池供电类产品，如计算机、消费类产品和工业设备等。

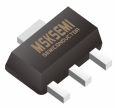
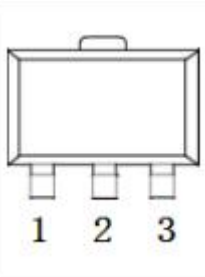
特性

- 高精度输出电压：±2.5%
- 输出电压：1.5V～5.0V(步长 0.1V)
- 极低的静态偏置电流(Typ.=8.0μA)
- 低的温度调整系数
- 最高输入电压可达 8V
- 带载能力强：当 Vin=4.3V 且 Vout=3.3V 时，Iout=250mA
- 可以作为调整器和参考电压来使用
- 输入稳定性好：Typ. 0.03%/V

产品用途

- 电池供电系统
- 无绳电话设备
- 无线控制系统
- 便携/手掌式计算机
- 便携式消费类设备
- 便携式仪器
- 汽车电子设备
- 电压基准源

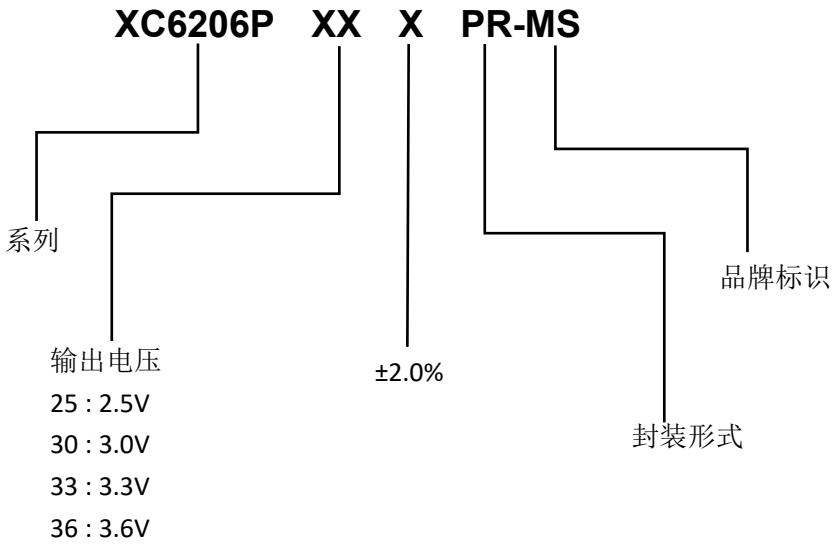
包装和订单信息

产品编号	封装		管脚定义功能	管体标记	最小包装(PCS)
XC6206P252PR-MS	SOT-89			6206A *** 25	1000
XC6206P302PR-MS				6206A *** 30	1000
XC6206P332PR-MS				6206A *** 33	1000
XC6206P362PR-MS				6206A *** 36	1000

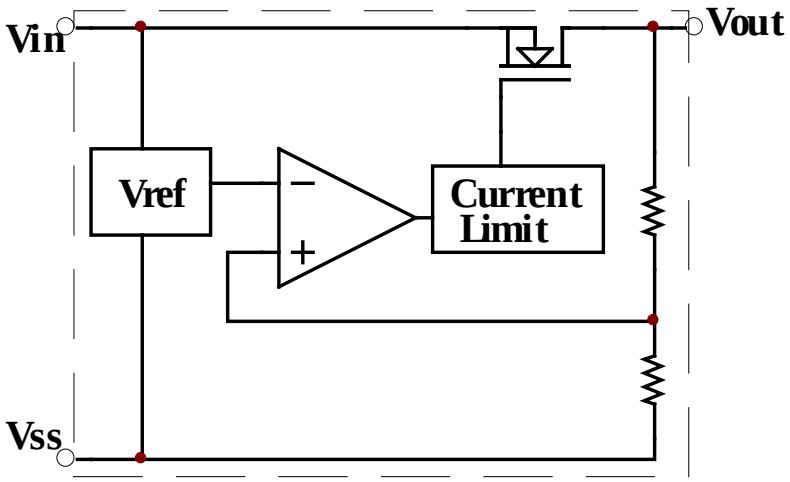
Notes:***Representing internal production number.

管脚序号 封装形式	管脚定义	功能说明
SOT89		
1	VSS	芯片接地端
3	VOUT	芯片输出端
2	VIN	启动输入端

产品命名



功能框图



极限参数

项目	符号	参数		极限值	单位
电压	Vin	输入电压		9	V
	Vout	输出电压		Vss-0.3 ~Vout+0.3	V
电流	Iout	输出电流		500	mA
功耗	PD	SOT23	最大允许功耗	300	mW
		SOT89-3		500	
温度	Tw	工作温度		-25～+80	℃
	Tc	存储温度		-40～+125	℃
	Th	焊接温度		260	℃,10s

电学特性 (Cin=Cout=10uF,Ta=25°C除特别指定)

特性	符号	条件		最小值	典型值	最大值	单位
输出电压	$V_{OUT}(E)$	I_{OUT}=1mA, V_{IN}= $V_{OUT}(T)$+1V		$V_{OUT}(T)$ *0.98	$V_{OUT}(T)$	$V_{OUT}(T)$* 1.02	V
最大输出电流	I_{OUT} (max)	V_{IN}=$V_{OUT}(T)$+1V		100			mA
跌落压差	Vdrop	I_{OUT} =50mA	1.5V≤$V_{OUT}(T)$≤2.5V		200	280	mV
			2.6V≤$V_{OUT}(T)$≤3.3V		160	240	
			3.4V≤$V_{OUT}(T)$≤5.5V		120	200	
静态电流	I_{SS}	V_{IN}= $V_{OUT}(T)$+1V			7		μA
负载稳定度	ΔV_{OUT}	V_{IN}= $V_{OUT}(T)$+1V, 1mA≤I_{OUT}≤80mA			20		mV
输入稳定度	$\Delta V_{OUT}/(\Delta V_{IN} \cdot V_{OUT})$	I_{OUT} =1mA, $V_{OUT}(T)$+0.5V ≤V_{IN}≤5.5V			0.1	0.2	%/V
输出电压温度系数	$\Delta V_{OUT}/(\Delta Ta \cdot V_{OUT})$	V_{IN}= $V_{OUT}(T)$+1V, I_{OUT}=10mA -40℃≤Ta≤85℃			±100		ppm/℃
输入电压	V_{IN}			1.8	--	8.0	V
纹波抑制比	PSRR	V_{IN}= [$V_{OUT}(T)$+1]V +1Vp-pAC I_{OUT} =10mA, f=1kHz			40		dB
短路电流	Ishort	V_{IN}= $V_{OUT}(T)$+1.5V , V_{OUT}=Vss			30		mA
过流保护电流	Ilimt	V_{IN}= $V_{OUT}(T)$+1.5V			380		mA

注 :

1、 V_{OUT} (T): 规定的输出电压。

2、V_{OUT} (E) : 有效输出电压 (即当 I_{OUT}保持一定数值, V_{IN} = (V_{OUT} (T)+1.0V)时的输出电压)。

3、I_{OUT} (max): V_{IN}=$V_{OUT}(T)$+1V, 缓慢增加输出电流, 当输出电压≤$V_{OUT}(E)$*95%时的电流值。

4、Vdrop= V_{IN1} - V_{OUT} (E)s : V_{IN1}=逐渐减小输入电压, 当输出电压降为 V_{OUT} (E)1 的 98%时的输入电压。

V_{OUT} (E)s= V_{OUT} (E)*98%

V_{OUT} (E)1=当 V_{IN}= $V_{OUT}(T)$+1V , Iout=某一数值时的输出电压值。

测试电路

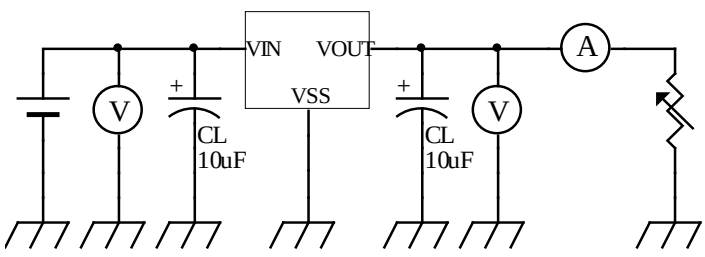


图 1

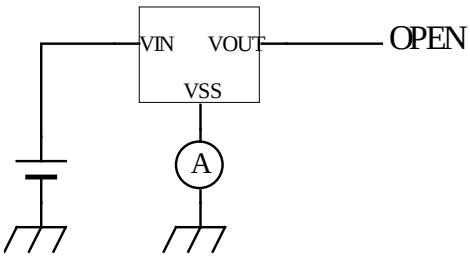
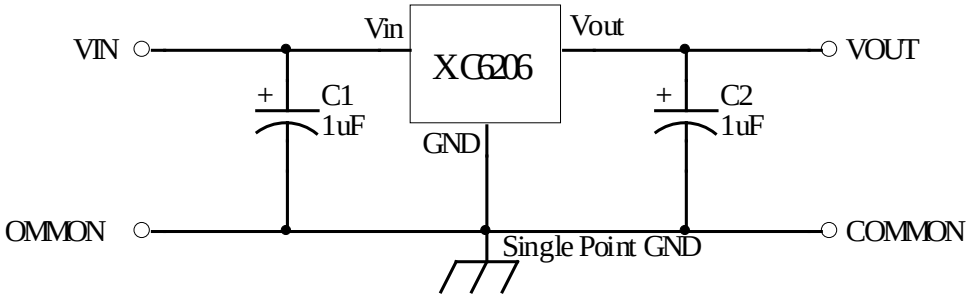


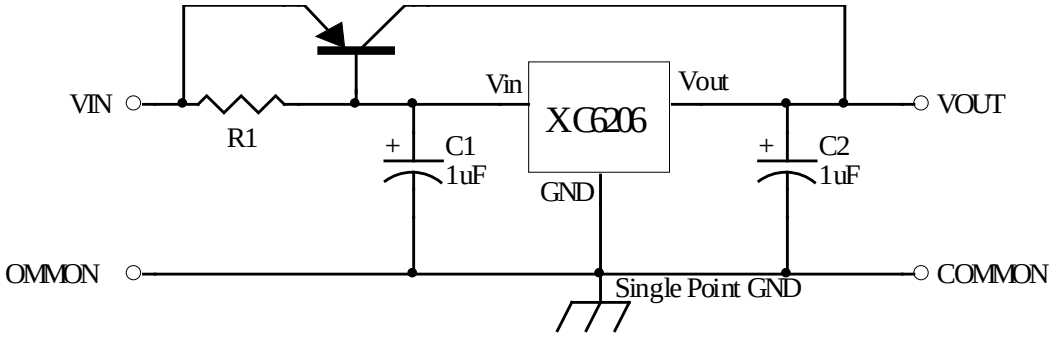
图 2

应用电路

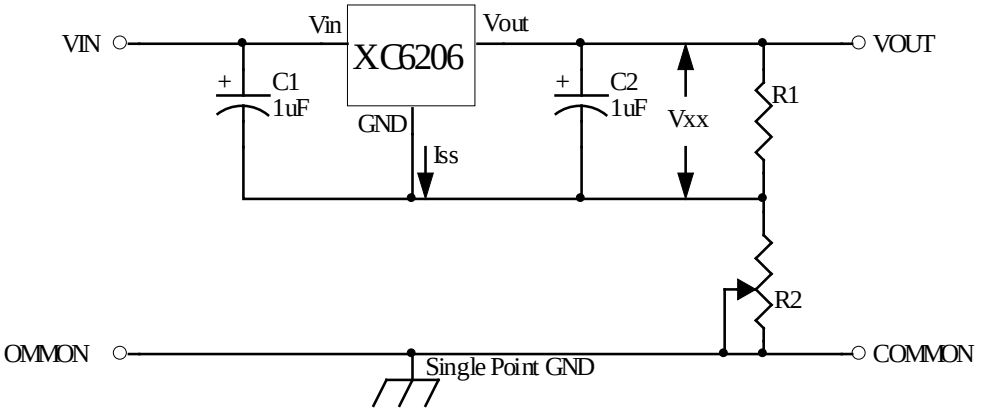
1、基本电路



2、大输出电流正电压型电压调整器

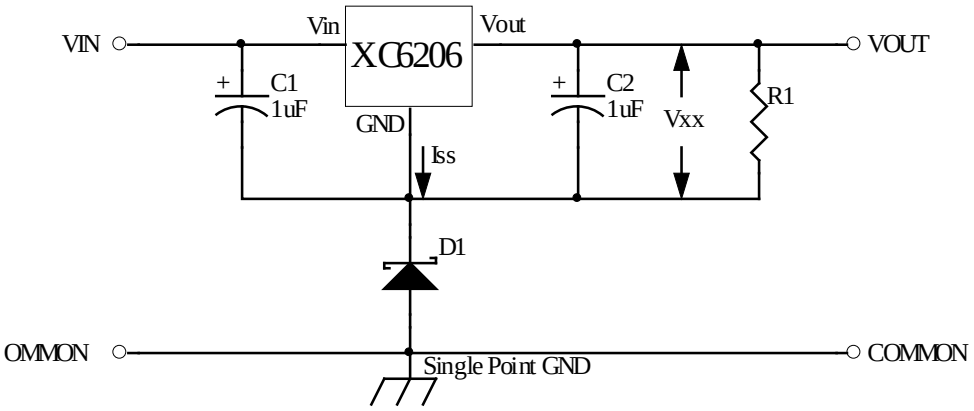


3、提高输出电压值电路（1）



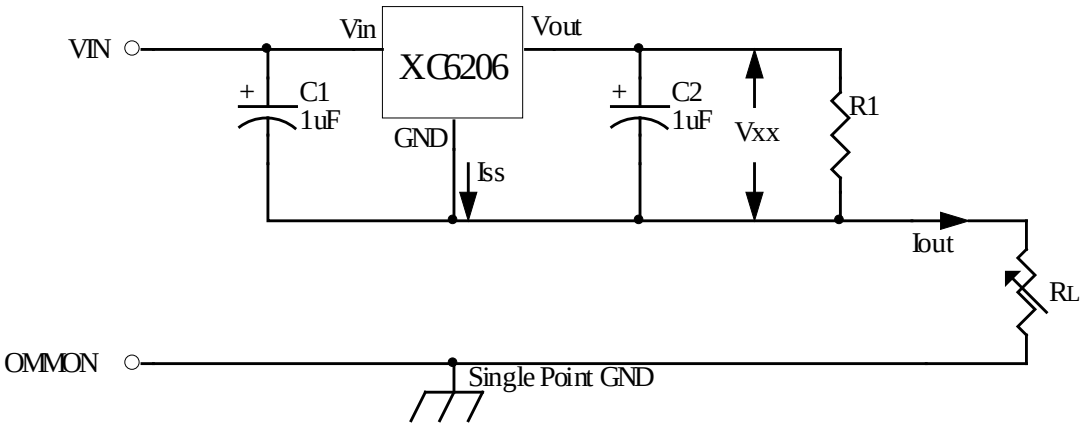
$$Vout=Vxx(1+R2/R1)+IssR2$$

4、提高输出电压电路（2）



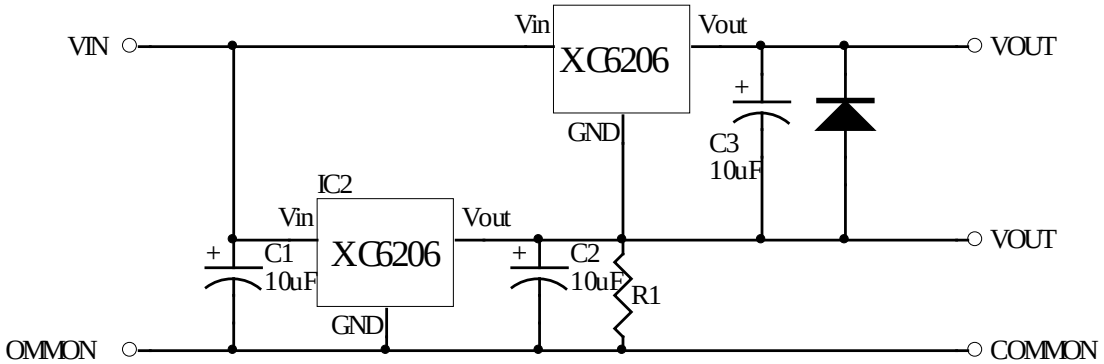
$Vout=Vxx+V_{D1}$

5、恒流调整器



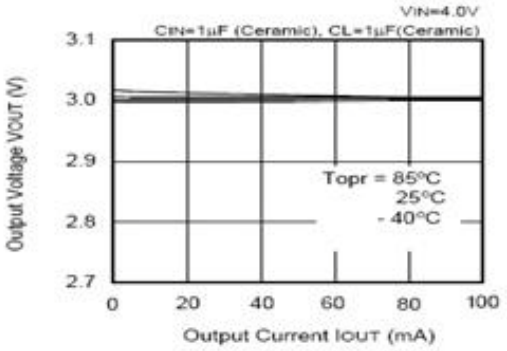
$Iout=Vxx/R_A+Iss$

6、双输出

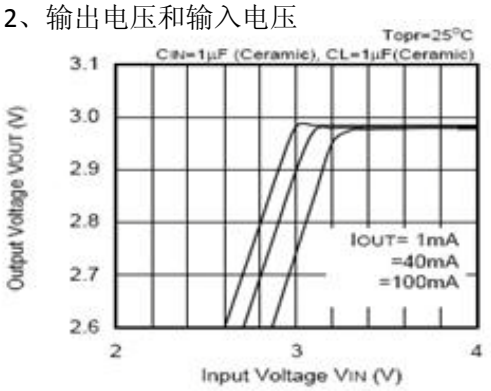


特性曲线图

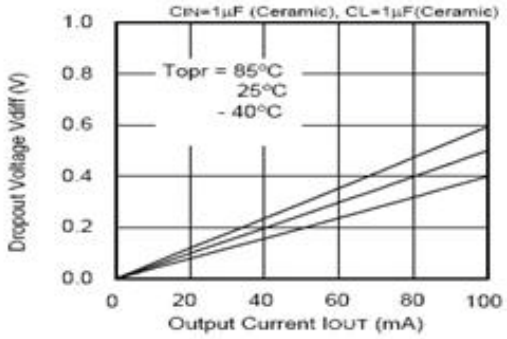
1、输出电压--输出电流（负载电流增加时）



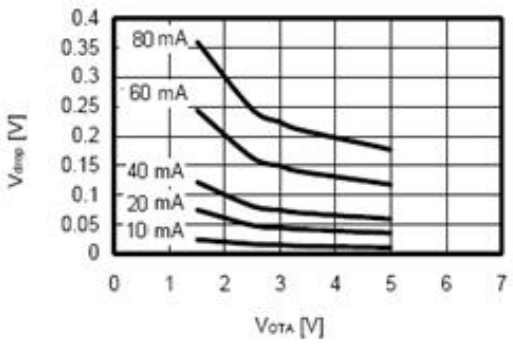
2、输出电压和输入电压



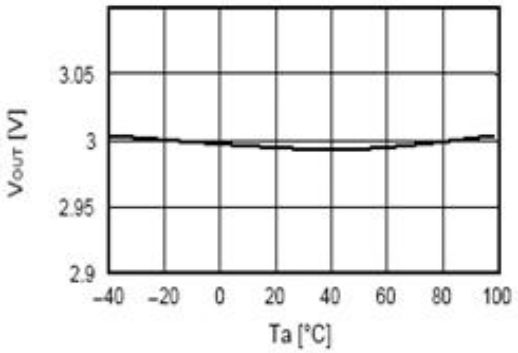
3、Dropout 电压和输出电流



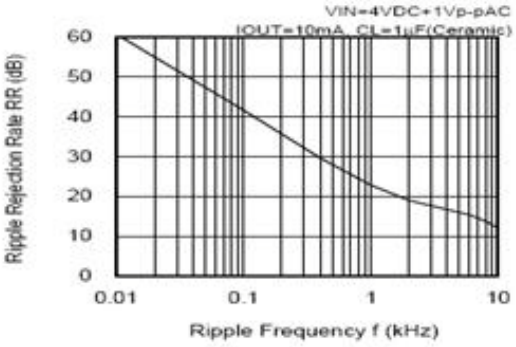
4、Dropout 电压和输出电压



5、输出电压和温度

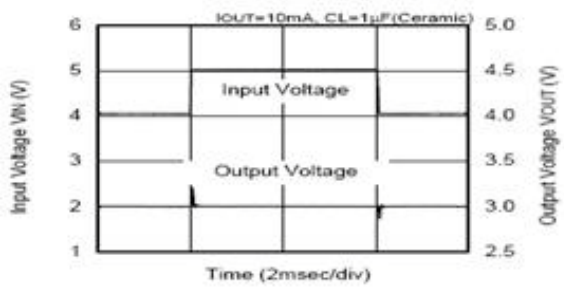


6、纹波抑制

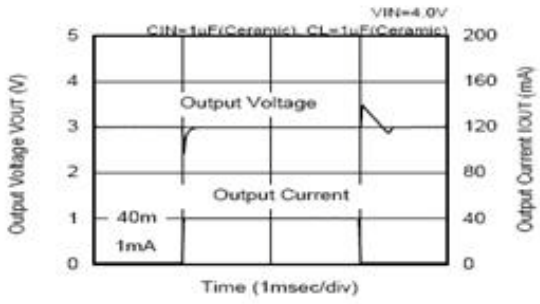


7、瞬态响应

输入过渡响应特性

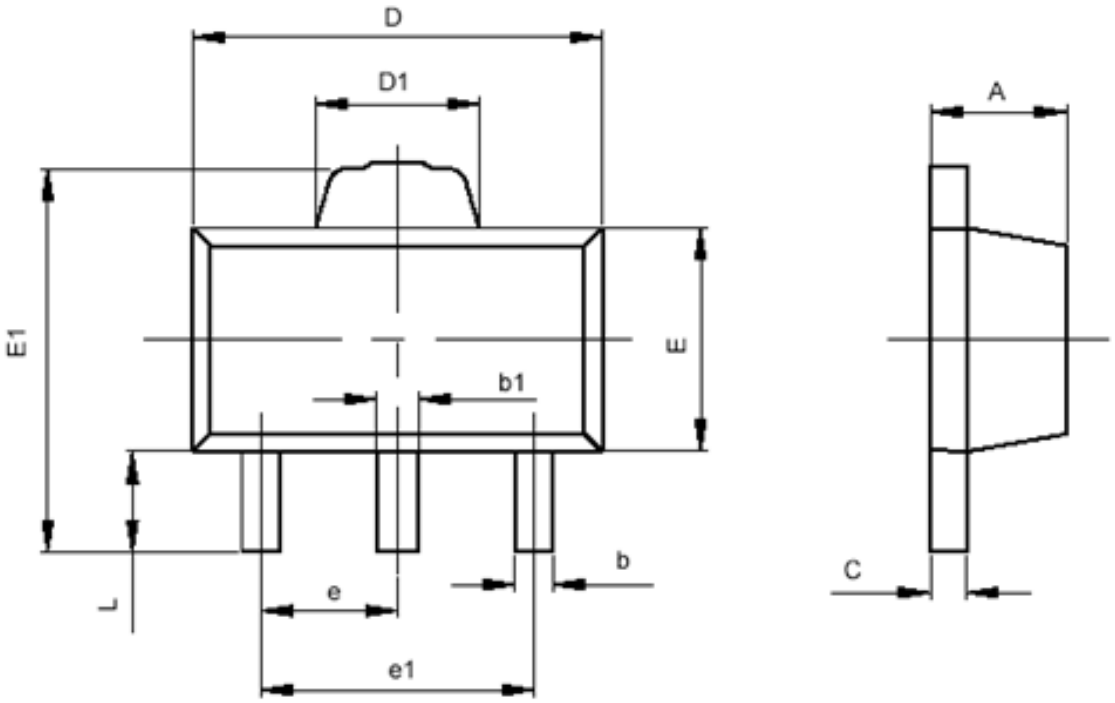


负载过渡输入响应特性



封装信息

SOT-89-3



符号	最小值（mm）	最大值（mm）
A	1.400	1.600
b	0.320	0.520
b1	0.360	0.560
c	0.350	0.440
D	4.400	4.600
D1	1.400	1.800
E	2.300	2.600
E1	3.940	4.250
e	1.500TYP	
e1	2.900	3.100
L	0.900	1.100

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