



产品简介

XC6206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（6.0uA Typ.），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。

产品特点

- 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.=6.0uA)
- 低的温度调整系数
- 最高输入电压可达6.5V
- 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
- 封装形式：SOT-23-3L

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

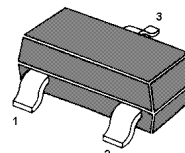
产品型号信息

产品型号	封装	输出电压	包装信息
XC6206Pxx2MR	SOT-23-3L	1.5-5.0V	3000/盘

xx: 15-50

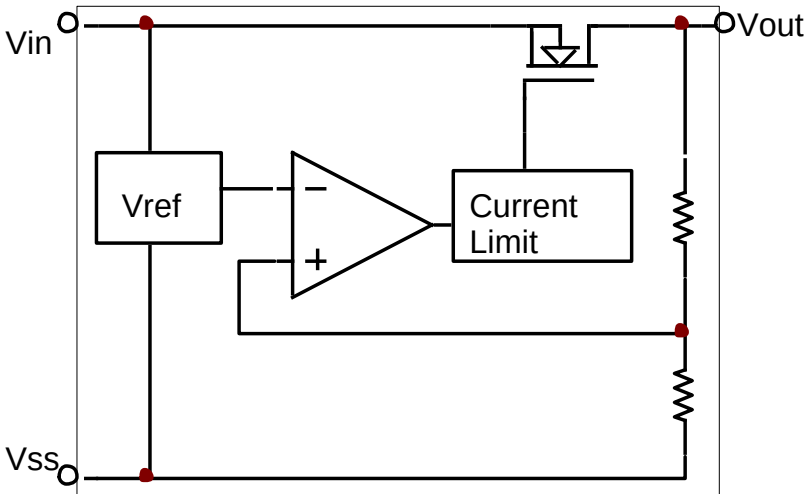
封装形式和管脚定义功能

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





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	8	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	最大允许功耗	300	mW
温度	Tw	工作温度	-25~+80	°C
	Tc	存储温度	-40~+125	°C
	Th	焊接温度	260	°C, 10s



电学特性 (C_{in}=C_{out}=10uF, T_a=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		μ A
负载稳定度	ΔV _{OUT}	V _{IN} = V _{OUT} (T)+1V, 1mA≤I _{OUT} ≤80mA		20		mV
输入稳定度	ΔV _{OUT} /ΔV _{IN} •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	ΔV _{OUT} /ΔT _a •V _{OUT}	V _{IN} = V _{OUT} (T) +1V, I _{OUT} =10mA -40°C		±100		ppm/°C
输入电压	V _{IN}	≤T _a ≤85°C	1.8	--	6.5	V
纹波抑制比	PSRR	V _{IN} = [V _{OUT} (T)+1]V +1Vp-pA C I _{OUT} =10mA,f=1kHz		40		dB
短路电流	I _{short}	V _{IN} = V _{OUT} (T)+1.5V , V _{OUT} =V _{SS}		30		mA
过流保护电流	I _{limt}	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 , I_{out}=某一数值时的输出电压值。

测试电路

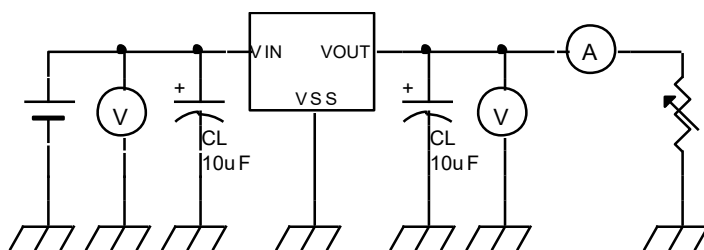


图 1

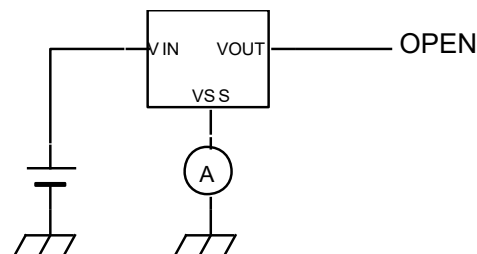
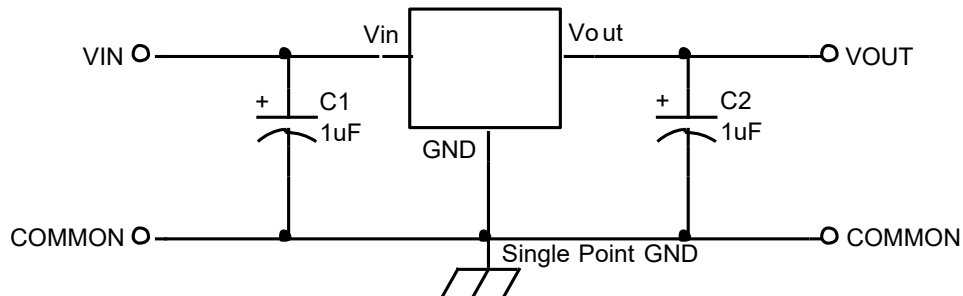


图 2

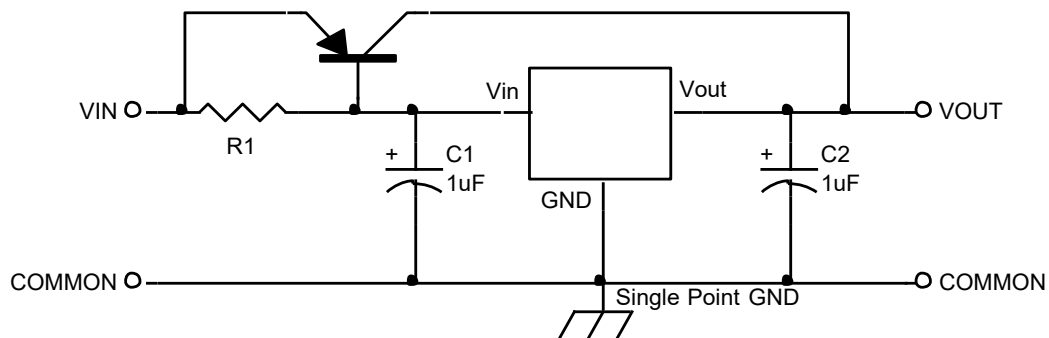


应用电路

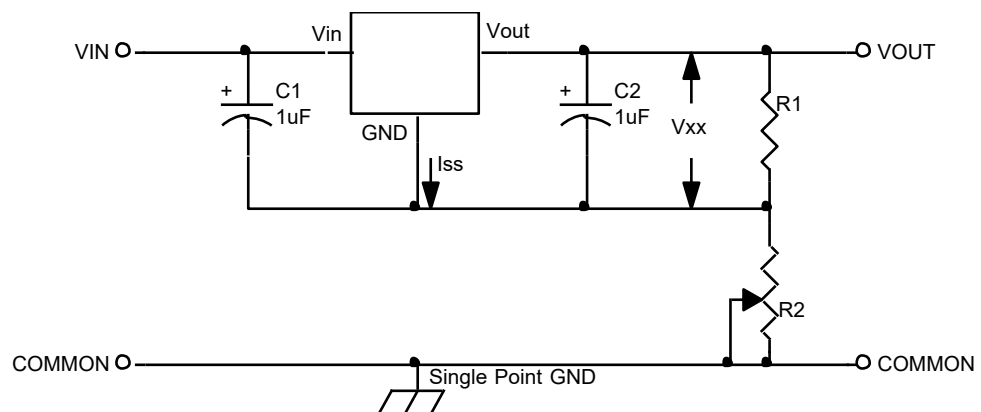
1、基本电路



2、大输出电流正电压型电压调整器



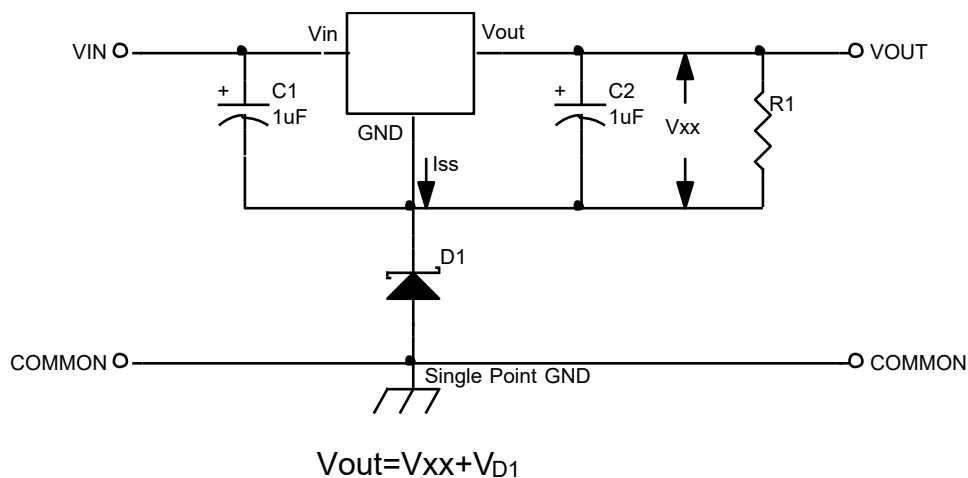
3、提高输出电压值电路 (1)



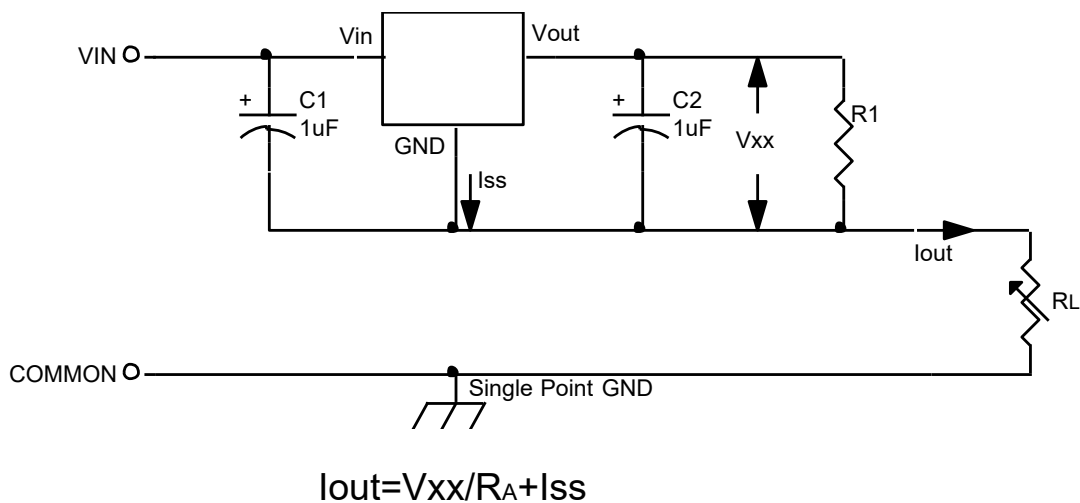
$$V_{out} = V_{xx}(1 + R_2/R_1) + I_{ss}R_2$$



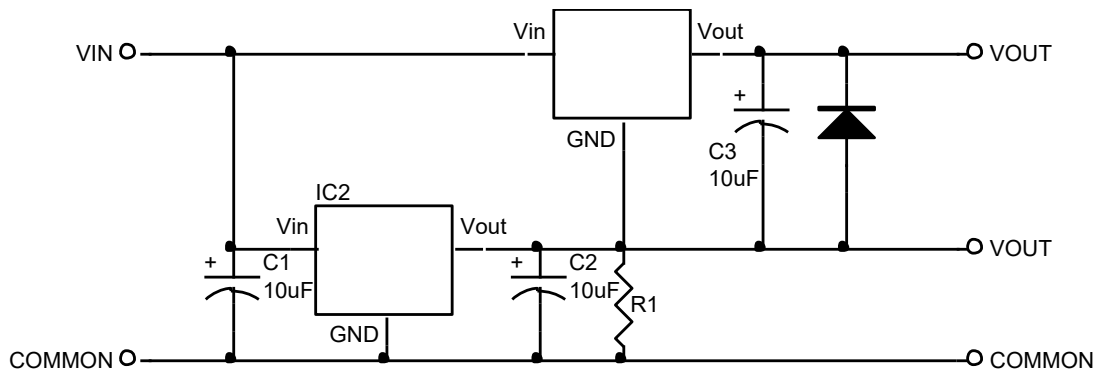
4、提高输出电压电路 (2)



5、恒流调整器



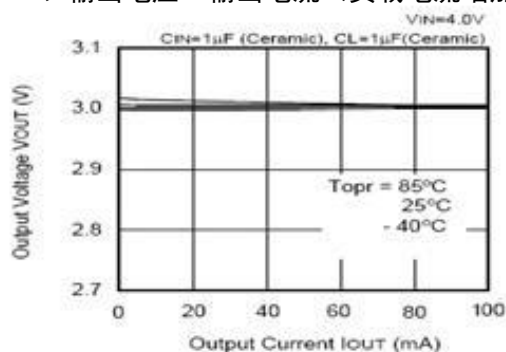
6、双输出



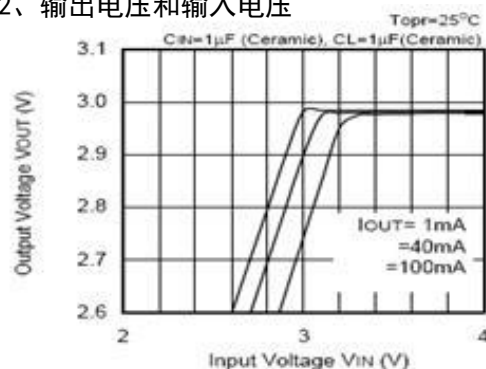


特性曲线图

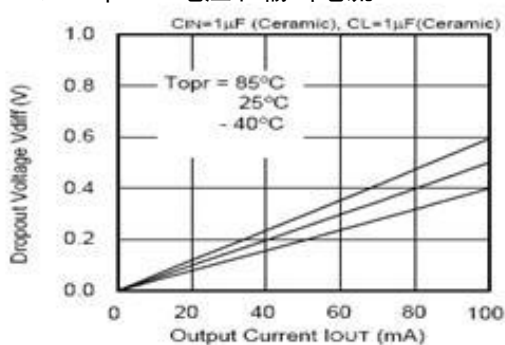
1、输出电压—输出电流（负载电流增加时）



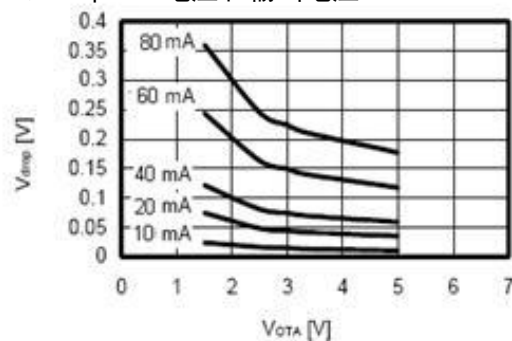
2、输出电压和输入电压



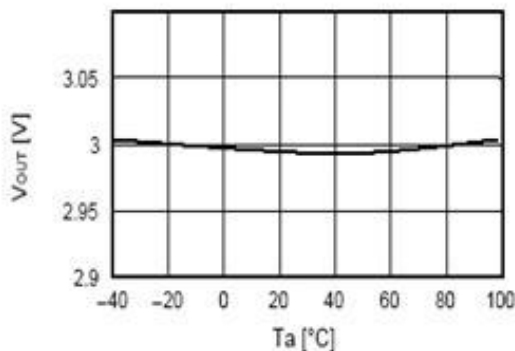
3、Dropout 电压和输出电流



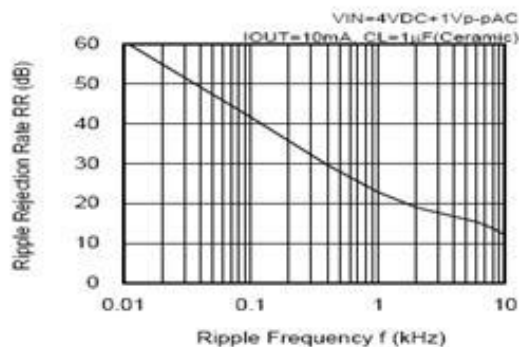
4、Dropout 电压和输出电压



5、输出电压和温度

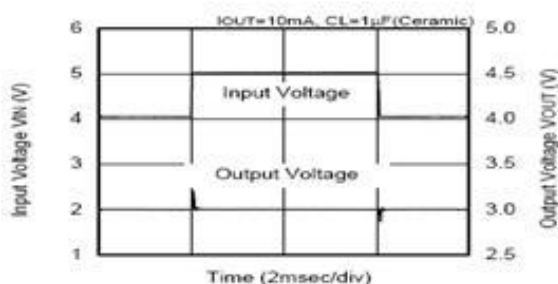


6、纹波抑制

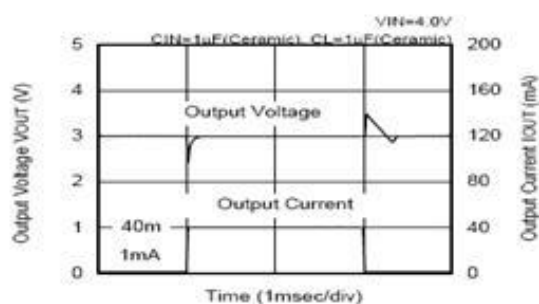


7、瞬态响应

输入过渡响应特性

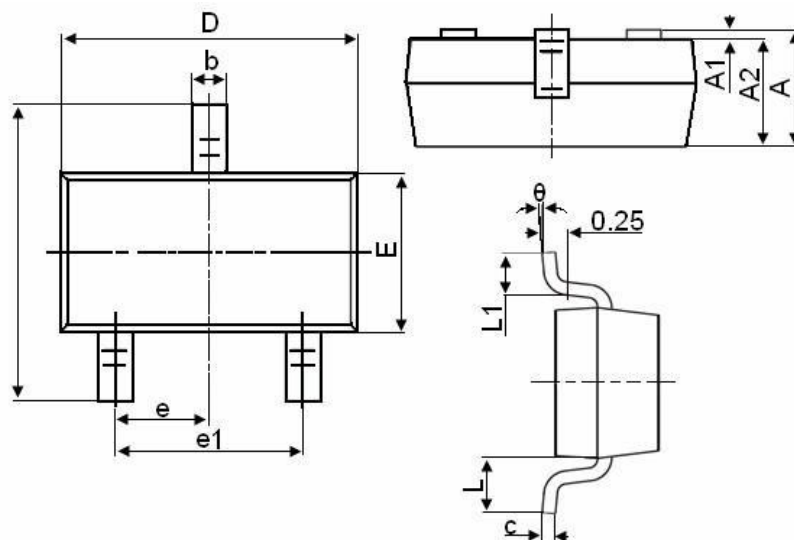


负载过渡输入响应特性





封装信息
SOT-23-3L



Symbol	Dimensions in Millimeters	
	MIN.	MAX.
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.300	0.500
c	0.100	0.200
D	2.800	3.000
E	1.500	1.700
E1	2.650	2.950
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.600
θ	0°	8°



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