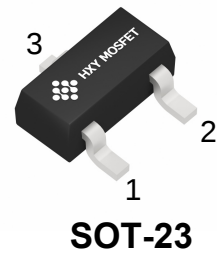




产品描述

XC6206P362MR是具有高纹波抑制率、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（6.0 μ A Typ.），它们能在输入、输出电压差极小的情况下提供300mA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。



管脚编号	管脚名	功能描述
1	VSS	接地
2	VOU	输出
3	VIN	电源输入

产品特点

- ◇ 最大输出电流：500mA
- ◇ 压差电压：120mV@50mA
- ◇ 最大工作电压：6.5V
- ◇ 输出电压范围：3.6V
- ◇ 高精度：2%
- ◇ 极低的静态工作电流：6.5 μ A (典型值)
- ◇ 内置过流和短路保护电路
- ◇ 工作温度范围：-25 $^{\circ}$ C ~ 85 $^{\circ}$ C

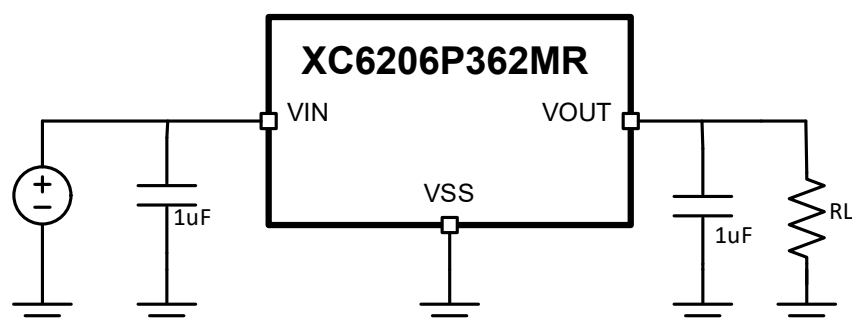
应用领域

- ◇ 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

包装标识与订购信息

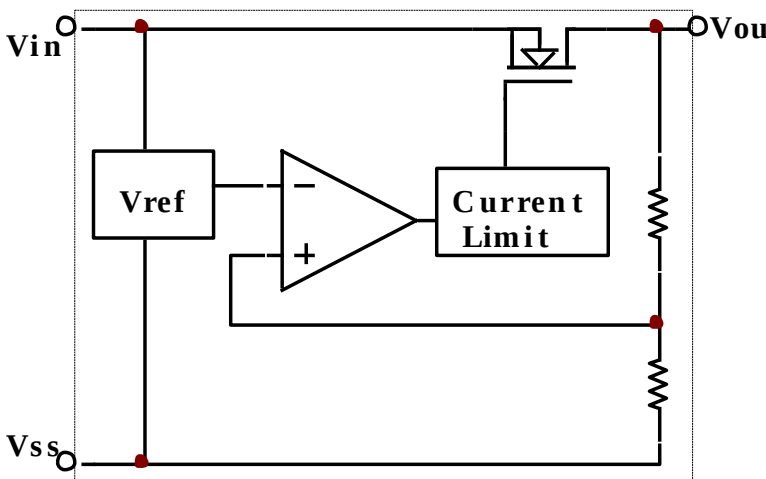
产品型号	封装规格	丝印	数量信息(PCS)
XC6206P362MR	SOT-23	665K	3000

典型应用





功能框图



极限参数

(注意：超过这些限制可能会损坏器件。长期暴露在绝对最大额定条件下会影响器件的可靠性。)

项目	符号	极限值	单位
输入电压	V_{IN}	6.5	V
输出电流	I_{OUT}	500	mA
输出电压	V_{OUT}	$V_{SS}-0.3 \sim V_{IN}+0.3$	V
功 耗	P_d	0.30	W
工作温度	T_{opr}	$-25 \sim +85$	$^{\circ}C$
存储温度	T_{stg}	$-55 \sim +125$	$^{\circ}C$



电学参数

特性	符号	条件	最小值	典型值	最大值	单位
输出电压	$V_{OUT}(E)$	$I_{OUT}=1mA, V_{IN}=V_{OUT}(T)+1V$	3.528	3.6	3.672	V
最大输出电流	$I_{OUT}(\max)$	$V_{IN}=V_{OUT}(T)+1V$	100			mA
跌落压差	V_{drop}	$I_{OUT}=50mA$		120	200	mV
静态电流	I_{SS}	$V_{IN}=V_{OUT}(T)+1V$		7		μA
负载稳定度	ΔV_{OUT}	$V_{IN}=V_{OUT}(T)+1V, 1mA \leq I_{OUT} \leq 80mA$		20		mV
输入稳定度	$\Delta V_{OUT}/(\Delta V_{IN} \cdot V_{OUT})$	$I_{OUT}=1mA,$ $V_{OUT}(T)+0.5V \leq V_{IN} \leq 5.5V$		0.1	0.2	%/V
输出电压 温度系数	$\Delta V_{OUT}/(\Delta T_a \cdot V_{OUT})$	$V_{IN}=V_{OUT}(T)+1V, I_{OUT}=10mA$ $-40^{\circ}C \leq T_a \leq 85^{\circ}C$		± 100		ppm/ $^{\circ}C$
输入电压	V_{IN}		1.8	—	8.0	V
纹波抑制比	PSRR	$V_{IN}=[V_{OUT}(T)+1]V+1V_{p-pAC}$ $I_{OUT}=10mA, f=1kHz$		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 $\leq V_{OUT}(E) \cdot 95\%$ 时的电流值。
- 4、 $V_{drop}=V_{IN1}-V_{OUT}(E)_{98\%}$ ： V_{IN1} 逐渐减小输入电压，当输出电压降为 $V_{OUT}(E)_{98\%}$ 时的输入电压。

$$V_{OUT}(E)_{98\%}=V_{OUT}(E) \cdot 98\%$$

$$V_{OUT}(E)_{98\%} \text{ 1} = \text{当 } V_{IN}=V_{OUT}(T)+1V, I_{out}=\text{某一数值时的输出电压值。}$$

测试电路

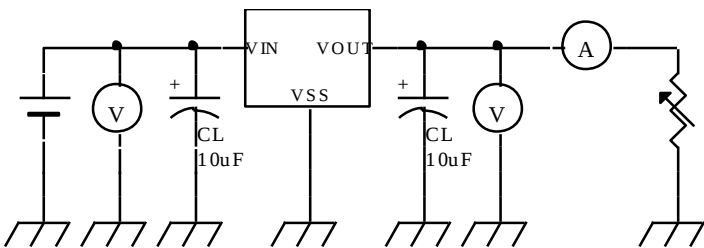


图 1

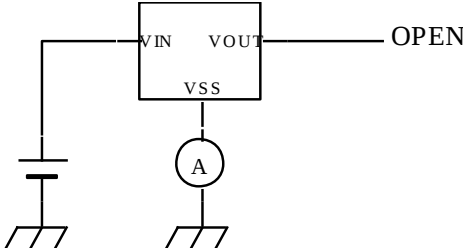
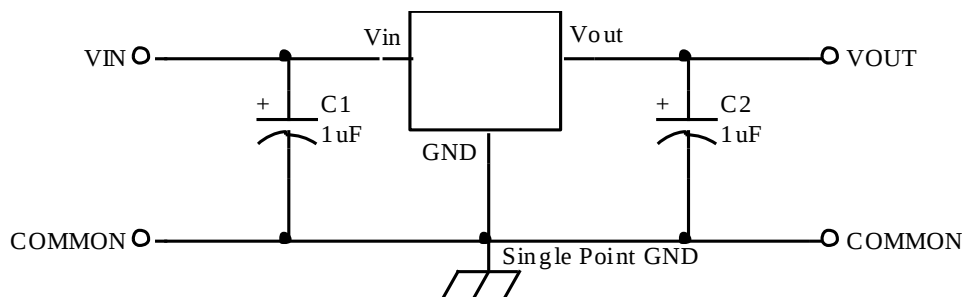


图 2

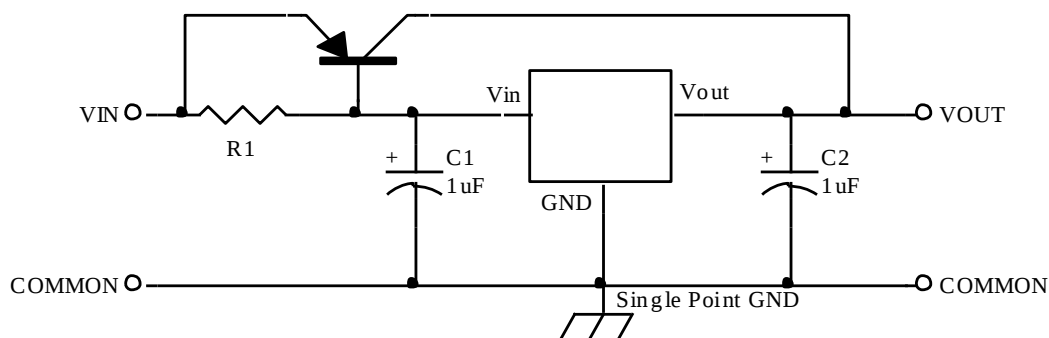


应用电路

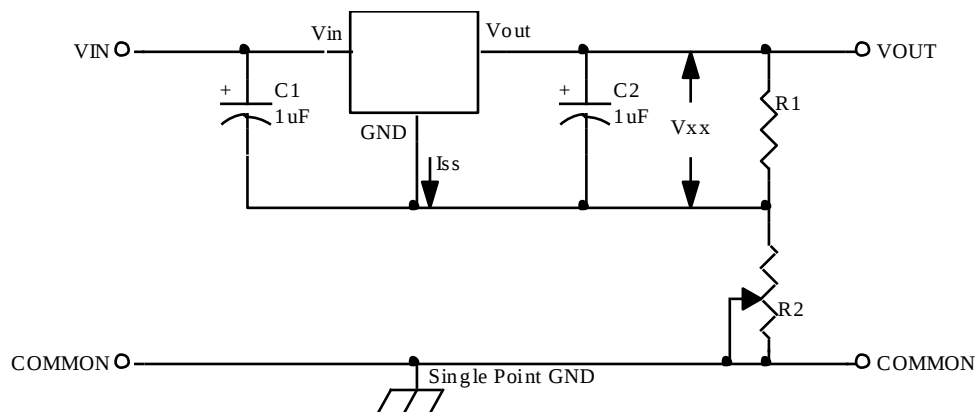
1、基本电路



2、大输出电流正电压型电压调整器



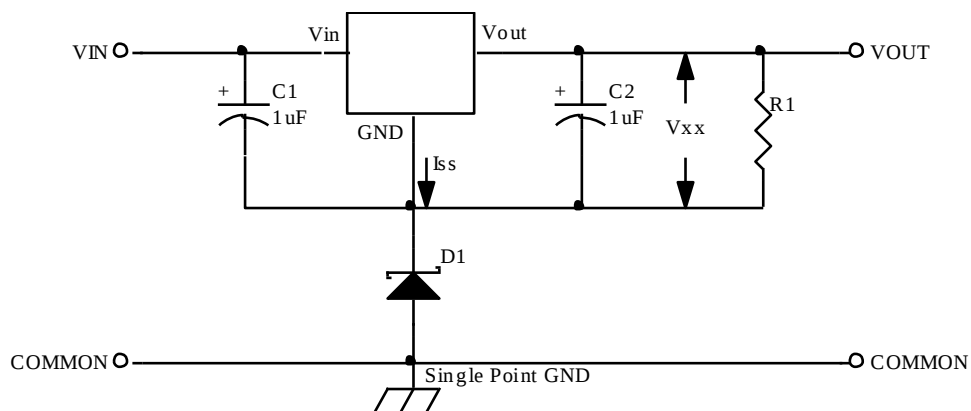
3、提高输出电压值电路（1）



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

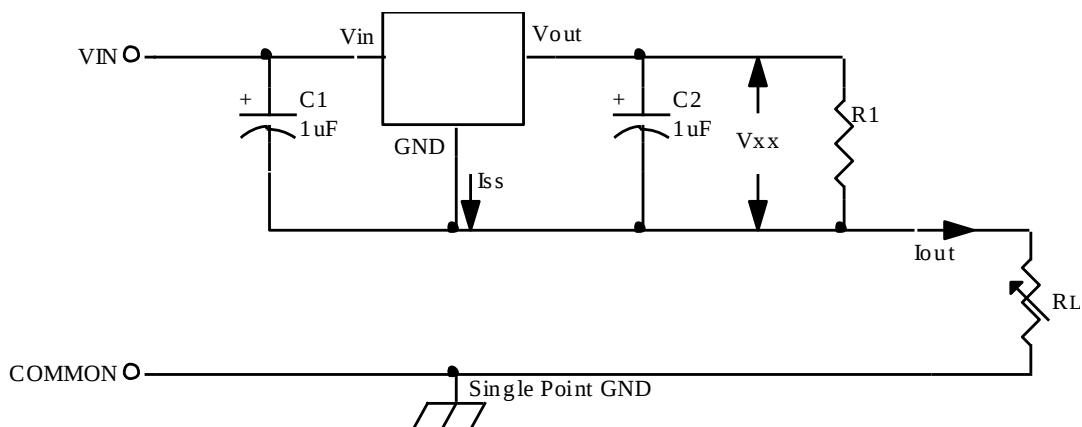


4、提高输出电压电路（2）



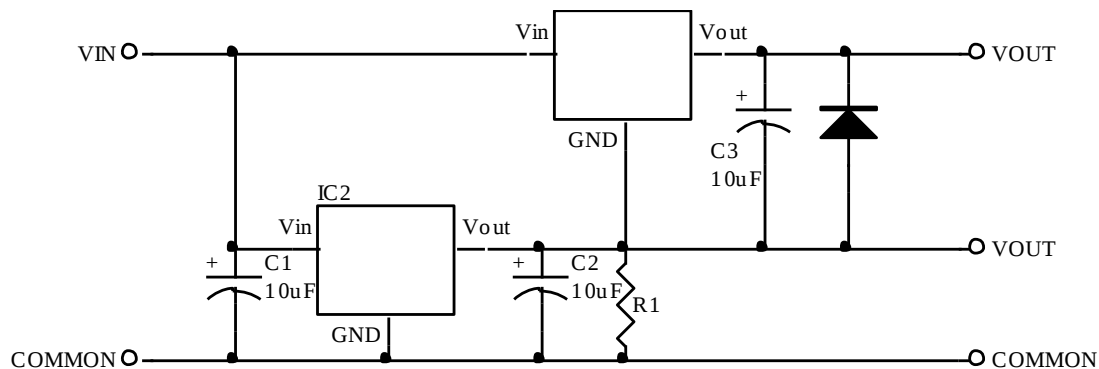
$$V_{out}=V_{xx}+V_{D1}$$

5、恒流调整器



$$I_{out}=V_{xx}/R_A+I_{ss}$$

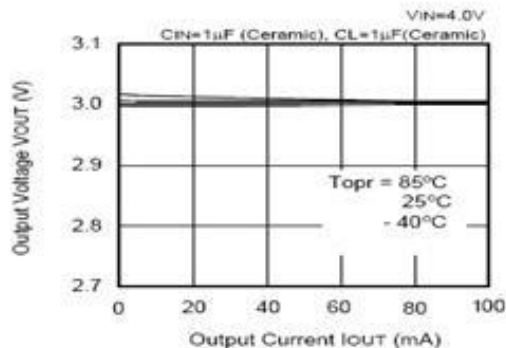
6、双输出



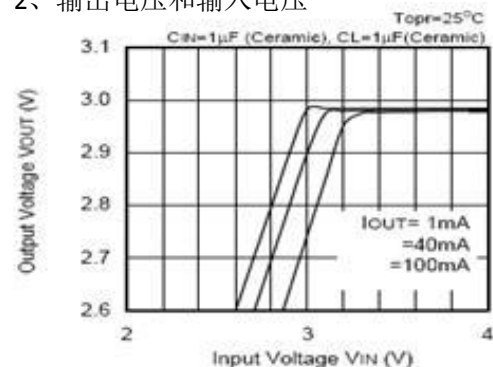


特征曲线

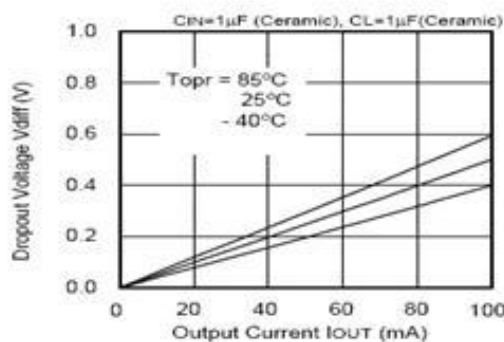
1、输出电压--输出电流（负载电流增加时）



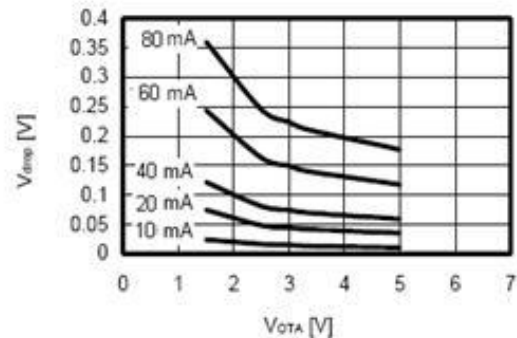
2、输出电压和输入电压



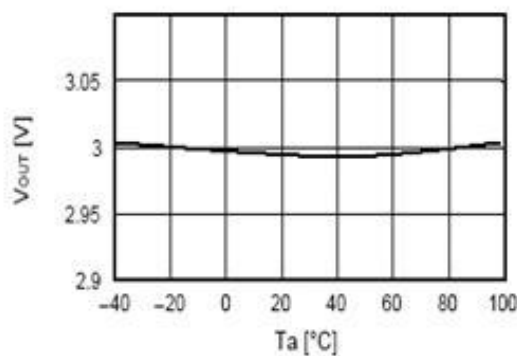
3、Dropout 电压和输出电流



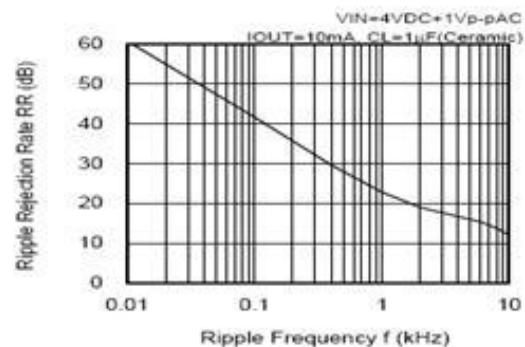
4、Dropout 电压和输出电压



5、输出电压和温度

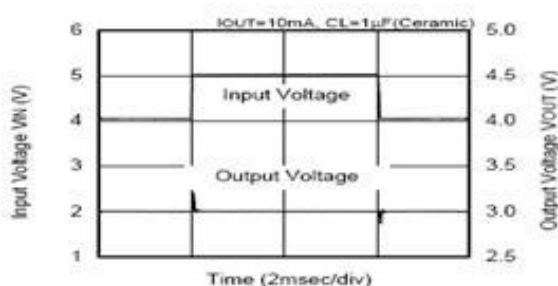


6、纹波抑制

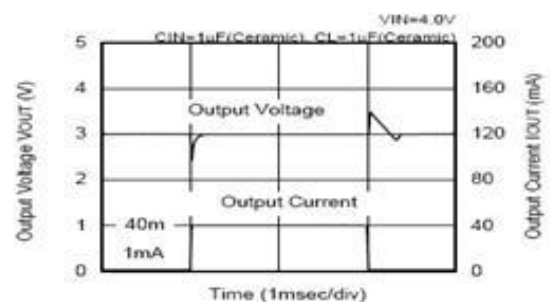


7、瞬态响应

输入过渡响应特性

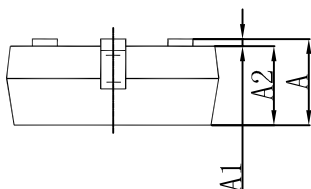
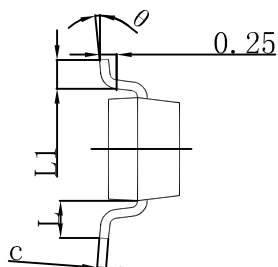
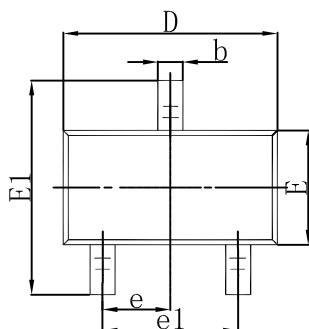


负载过渡输入响应特性

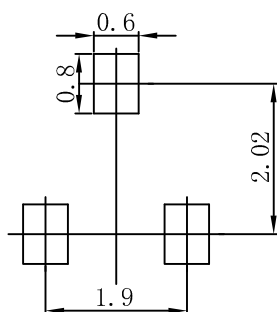




封装信息 SOT-23



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



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