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.=6.0μ A)
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

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

665K



SOT-23

产品描述

6206 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（6.0μA 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。

测试电路

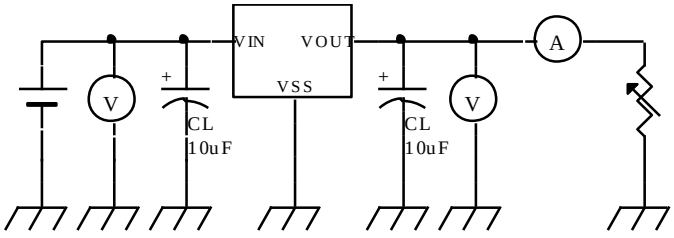


图 1

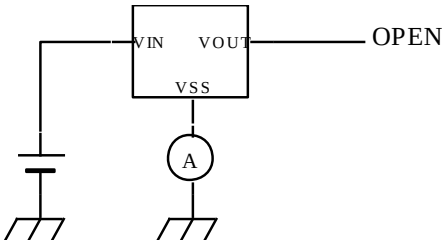
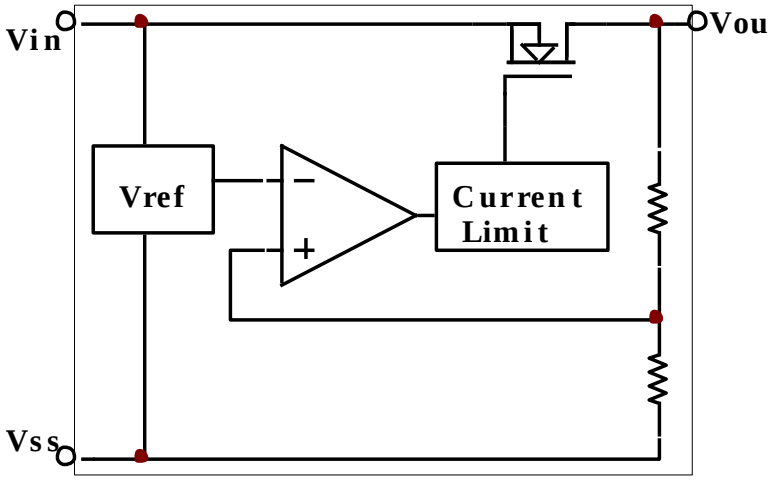


图 2

极限参数

项目	符号	参数		极限值	单位
电压	Vin	输入电压		6.5	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

功能框图



电学参数

(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。

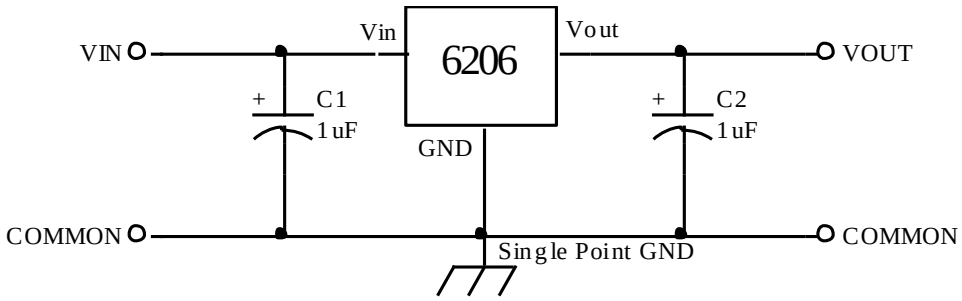
4、Vdrop= V_{IN1} - V_{OUT} (E)s ：V_{IN1}=逐渐减小输入电压， 当输出电压降为 V_{OUT} (E)1 的98%时的输入电压。

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

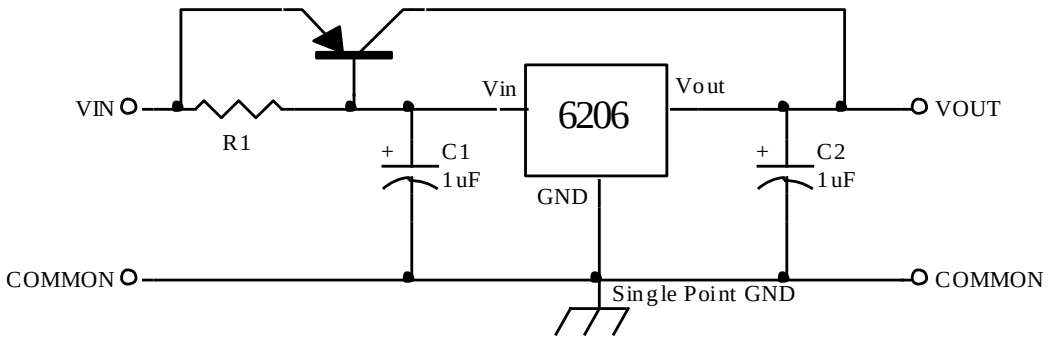
V_{OUT} (E)1=当 V_{IN}= $V_{OUT}(T)$+1V ， Iout=某一数值时的输出电压值。

应用电路

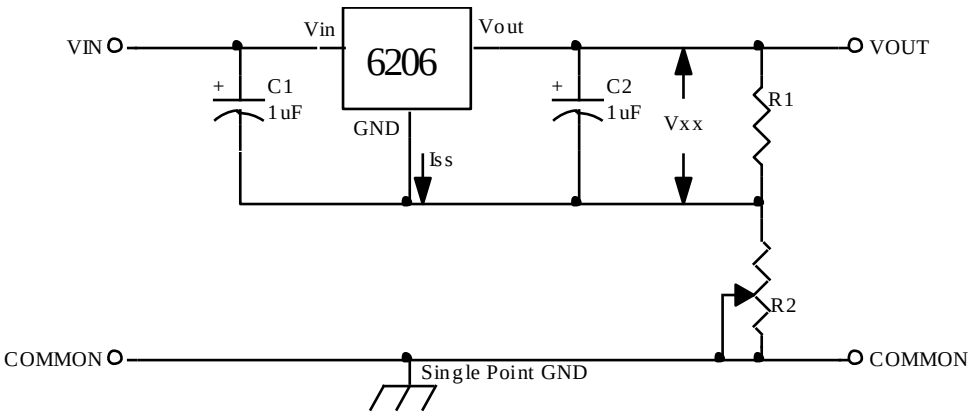
1、基本电路



2、大输出电流正电压型电压调整器



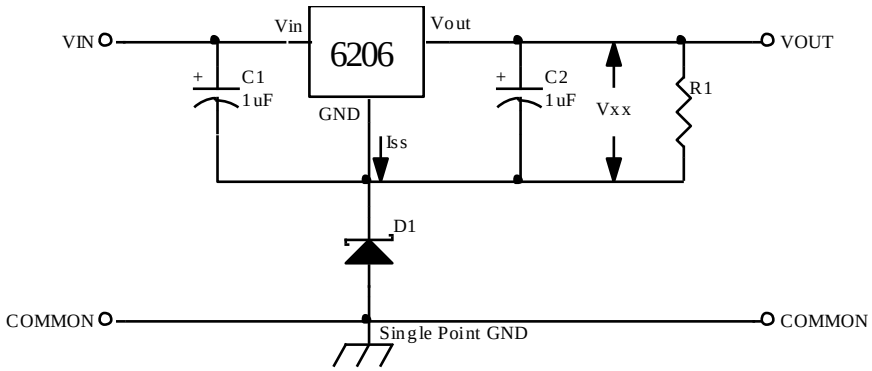
3、提高输出电压值电路（1）



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

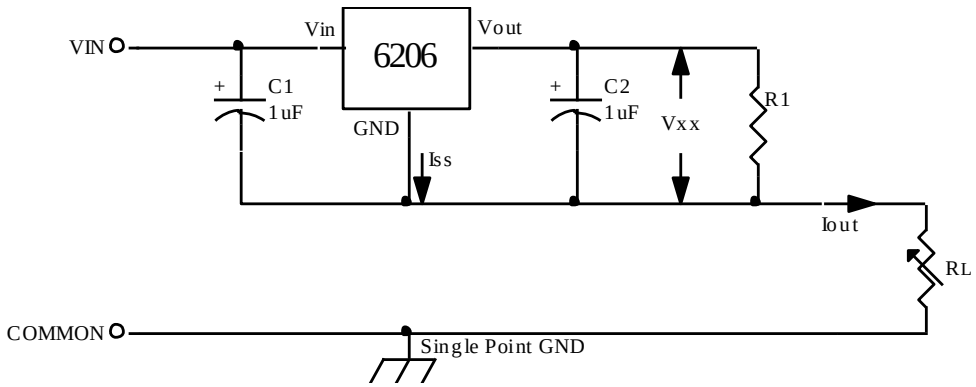
应用电路

4、提高输出电压电路（2）



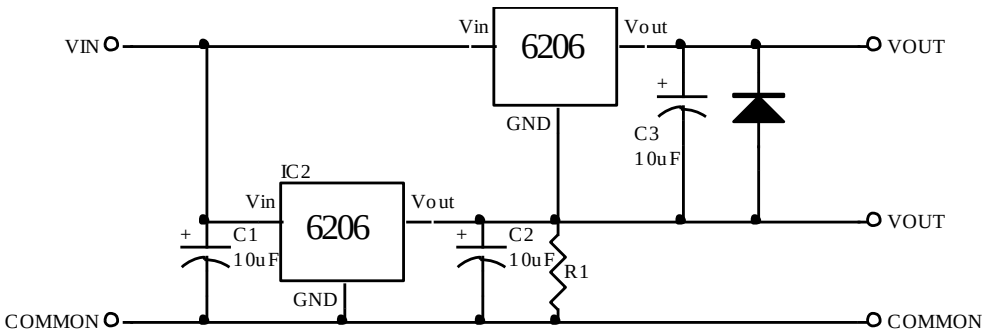
$Vout=Vxx+V_{D1}$

5、恒流调整器



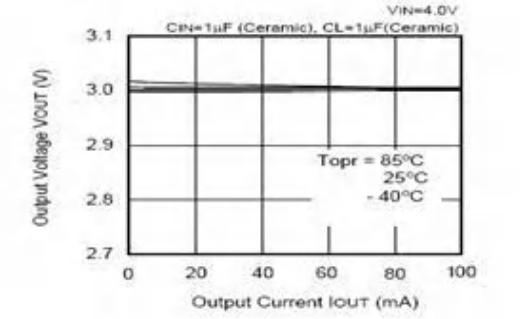
$Iout=Vxx/R_A+Iss$

6、双输出

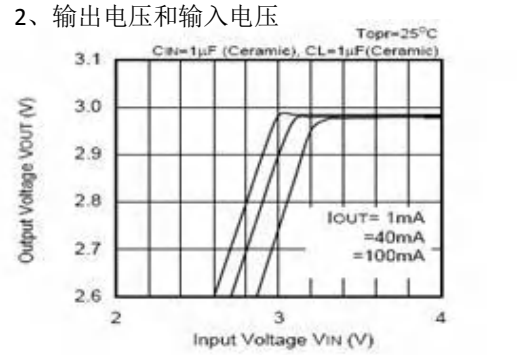


RATING AND CHARACTERISTIC CURVES

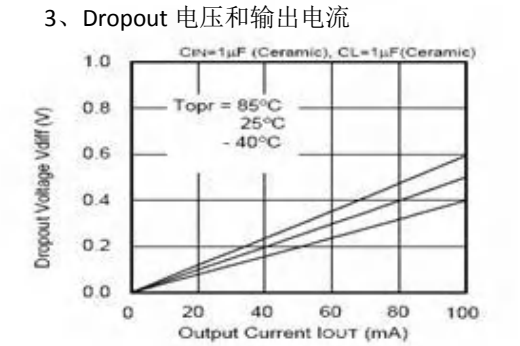
1、输出电压--输出电流（负载电流增加时）



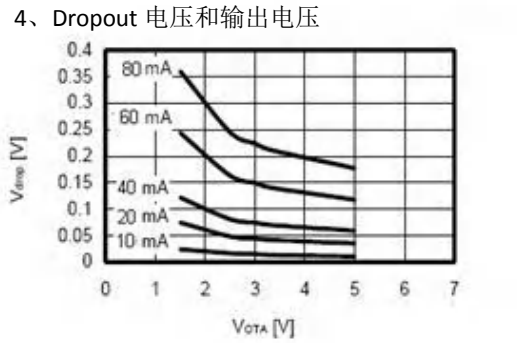
2、输出电压和输入电压



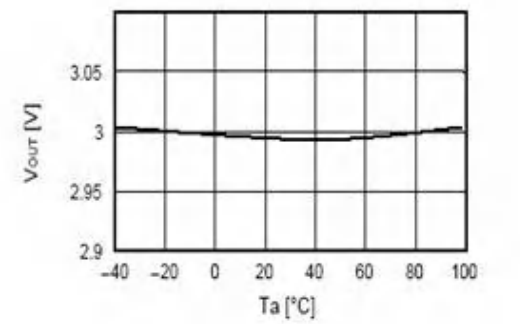
3、Dropout 电压和输出电流



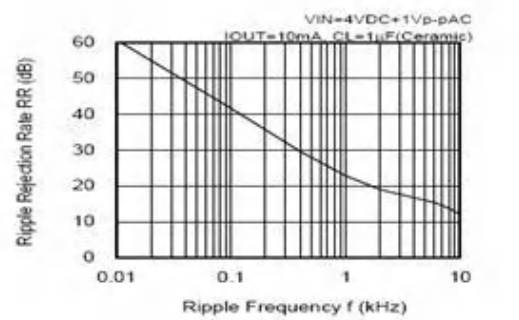
4、Dropout 电压和输出电压



5、输出电压和温度

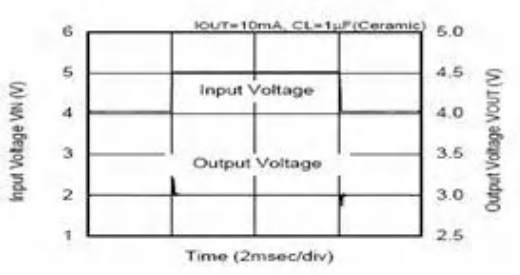


6、纹波抑制

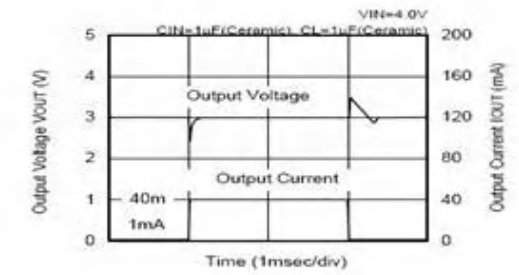


7、瞬态响应

输入过渡响应特性



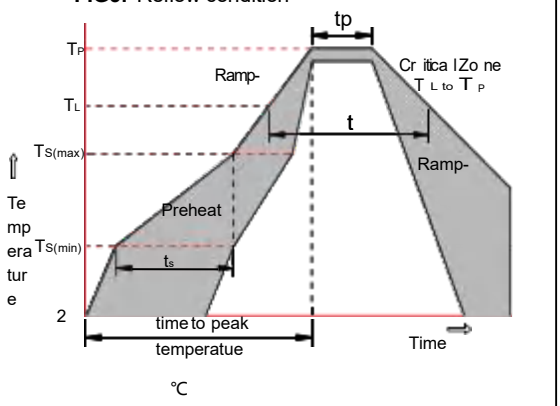
负载过渡输入响应特性



Soldering parameters

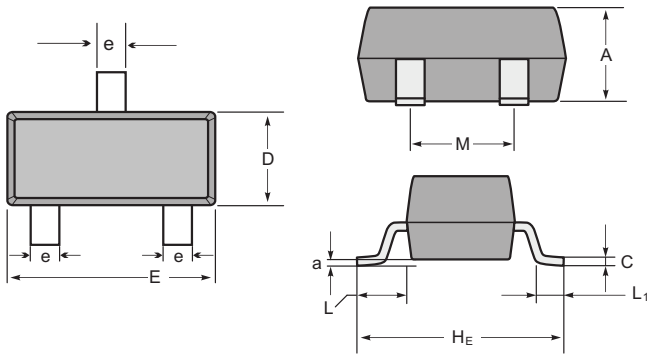
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

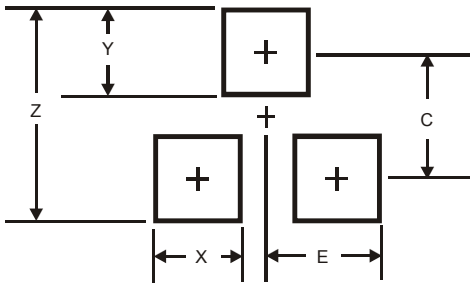
FIG5: Reflow condition



Package Dimensions & Suggested Pad Layout

SOT23





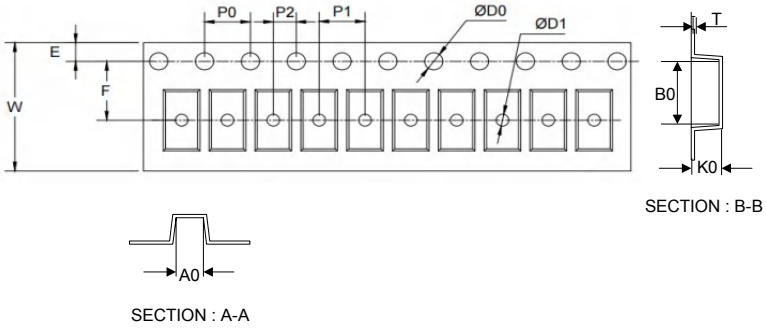
SOT-23 mechanical data

UNIT		A	C	D	E	H_E	e	M	L	L_1	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

Dimensions	SOT23
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

Tape & rell specification

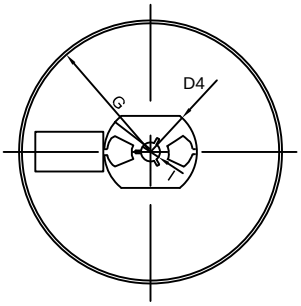
Tape

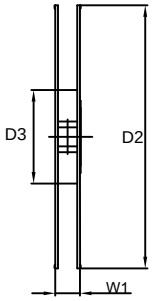


SECTION : B-B

SECTION : A-A

7" Reel





Symbol	Dimension (mm)
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
D0	1.55±0.10
D1	1.05±0.10
E	1.55±0.10
F	3.60±0.10
W	8.00±0.10
A0	3.80±0.20
B0	3.25±0.20
K0	1.45±0.10
T	0.25±0.05
D2	178.0±3.0
D3	55Min.
D4	R24.0±3.0
G	R82.0±3.0
I	13.0±2.0
W1	11.0±3.0
Quantity: 3000PCS	

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