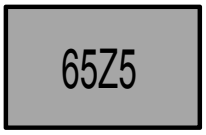
产品特点

最大输出电流：300mA
压差电压：160mV@50mA
最大工作电压：8V
输出电压范围：3.0V
高精度：2%
极低的静态工作电流：3μA (典型值)
内置过流和短路保护电路
工作温度范围：-40℃~ 85℃

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



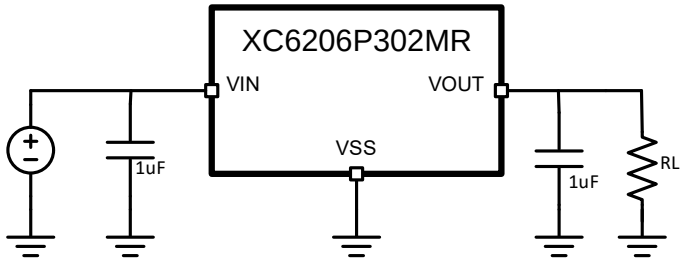


SOT-23

产品描述

XC6206P302MR 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（6.5μA Typ.），它们能在输入、输出电压差极小的情况下提供200mA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。

典型应用

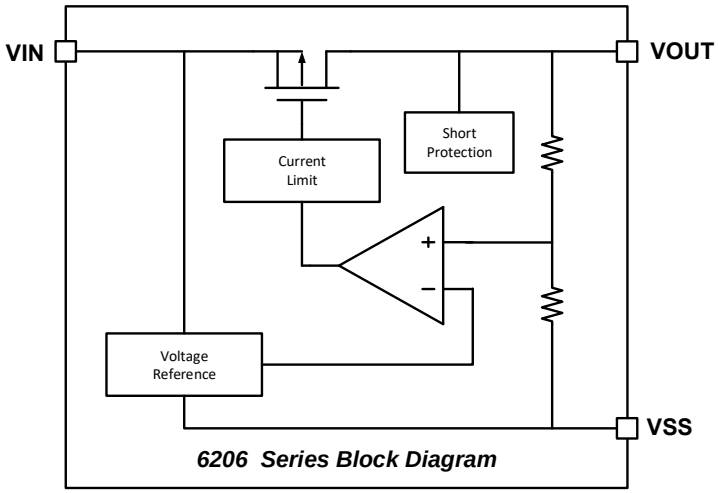


极限参数

(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}	8	V
输出电流	I_{OUT}	300	mA
输出电压	V_{OUT}	VSS-0.3~VIN+0.3	V
功　耗	P_d	0.20	W
工作温度	T_{opr}	-40~+85	℃
存储温度	T_{stg}	-55~+125	℃

功能框图



6206 Series Block Diagram

电学参数

(V_{IN}=5V, T_A=25℃, 除特别指定)

项目	符号	条件	最小值	典型值	最大值	单位
输出电压	$V_{OUT(E)}$	V_{IN} =$V_{OUT(S)}$+1.0V, I_{OUT}=1mA, ± 2%	$V_{OUT(S)}$ ×0.98	$V_{OUT(S)}$	$V_{OUT(S)}$ ×1.02	V
最大输出电流	I_{OUT}	V_{IN}≥$V_{OUT(S)}$+1.0V	300	—	—	mA
负载稳定度	ΔV_{OUT}	V_{IN}=V_{OUT}+1V 1mA≤I_{OUT}≤100mA	—	25	—	mV
跌落电压	V_{drop}	1.5V≤$V_{OUT(S)}$≤2.5V I_{OUT}=50mA	—	0.20	0.28	V
		2.6V≤$V_{OUT(S)}$≤3.3V I_{OUT}=50mA	—	0.16	0.24	
		3.4V≤$V_{OUT(S)}$≤6.0V I_{OUT}=50mA	—	0.12	0.20	
输入稳定度	$\frac{\Delta V_{OUT1}}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{OUT(S)}$+0.5V≤V_{IN}≤5.5V I_{OUT}=1mA	—	0.05	0.2	%/V
静态电流	I_{SS}	V_{IN}=$V_{OUT(S)}$+1.0V		3		μA
输入电压	V_{IN}		1.8		6	V
输出电压温度系数	$\frac{\Delta V_{OUT}}{\Delta T_{OPR} \cdot V_{OUT}}$	I_{OUT}=40mA -40℃≤T_{opr}≤85℃		100		ppm/℃
纹波抑制比	PSRR	V_{IN}= [V_{OUT}+1]V +1Vp-pAC I_{OUT} =10mA,f=1kHz		40		dB
短路电流	I_{SHORT}	V_{IN}=V_{OUT}+1.5V, V_{OUT}=V_{SS}		50		mA
过流保护电流	I_{LIMIT}			300	350	mA

注：

1. $V_{OUT(S)}$ = 规定输出电压
2. $V_{OUT(E)}$ =有效输出电压 (即当 I_{OUT} 保持一定数值，V_{IN}=V_{OUT}+1V，时的输出电压)
3. Vdrop = {V_{IN1} (注 5) -V_{OUT1} (注 4)}
4. V_{OUT1} = $V_{OUT\ (E)}$*98%
5. V_{IN1} = 逐渐减小输入电压， 当输出电压降为 VOUT (E)1 的98%时的输入电压。
6. Unless otherwise stated, V_{IN} = $V_{OUT(S)}$+1.0V

RATING AND CHARACTERISTIC CURVES

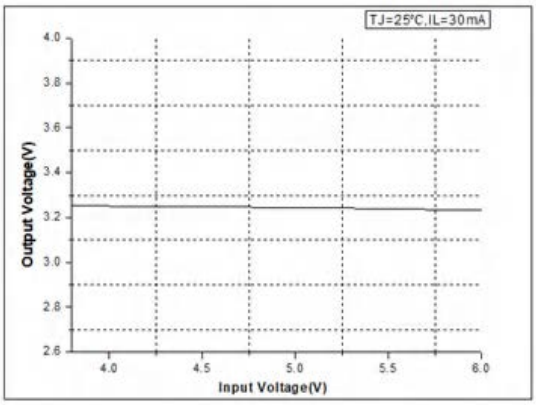


图1 输出电压和输入电压关系

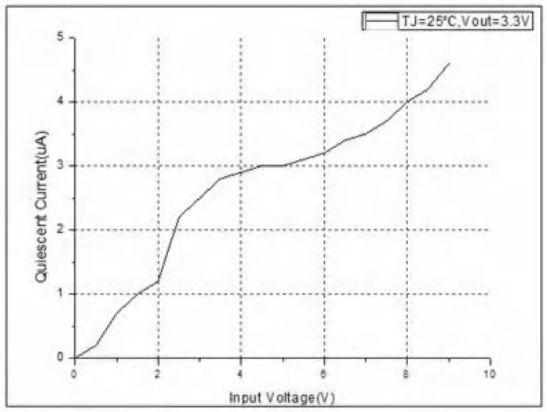


图2 静态功耗和输入电压关系

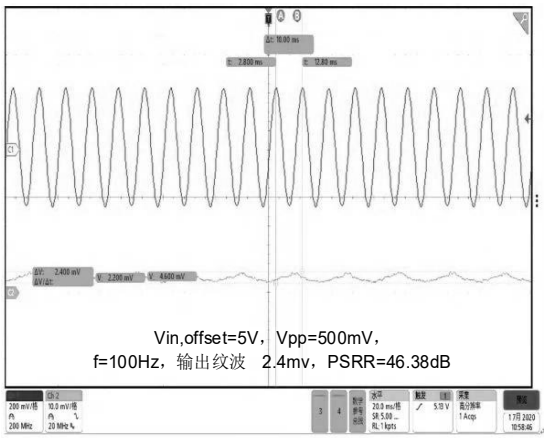


图3 纹波抑制比（f=100Hz）

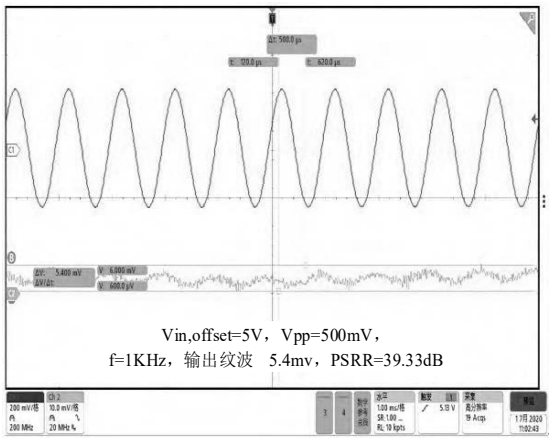


图4 纹波抑制比（f=1KHz）

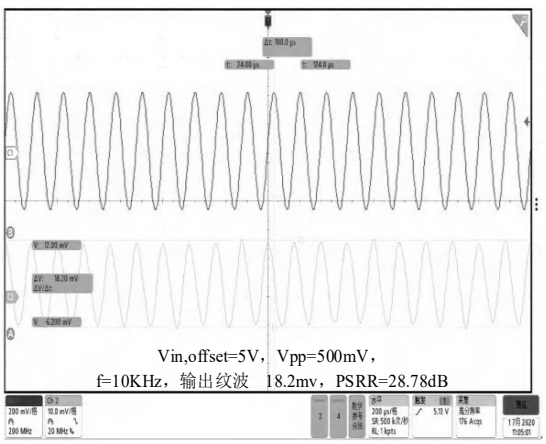


图5 纹波抑制比（f=10Hz）

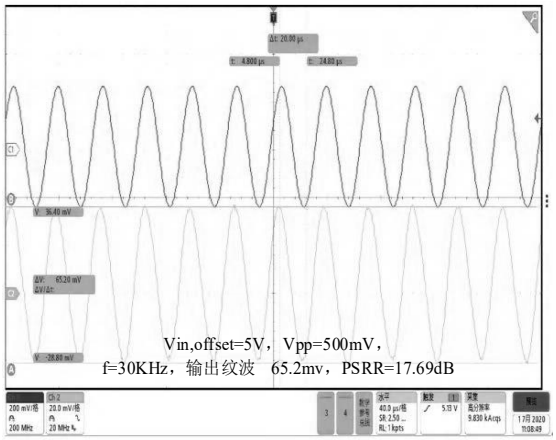
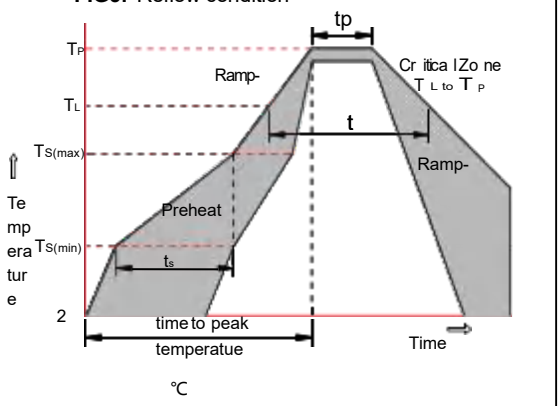


图6 纹波抑制比（f=30Hz）

Soldering parameters

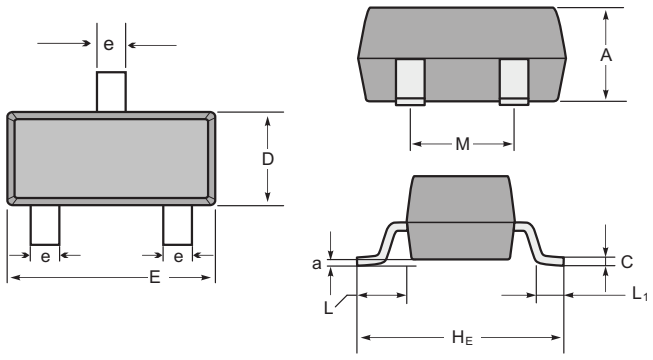
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid 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℃

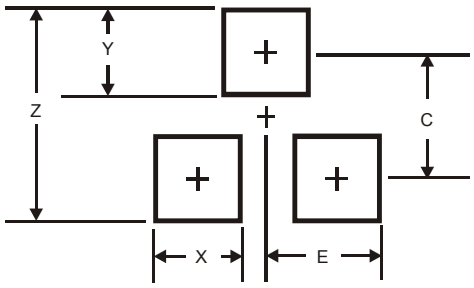
FIG5: Reflow condition



Package Dimensions & Suggested Pad Layout

SOT23





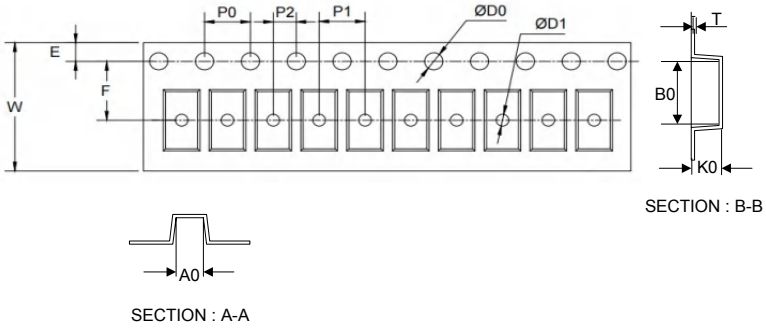
SOT-23 mechanical data

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

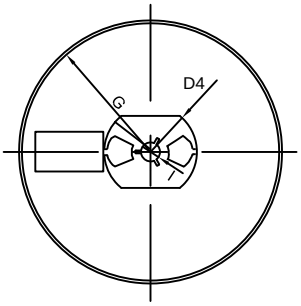
Tape

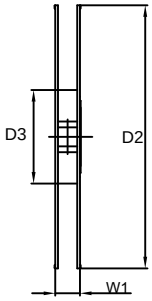


SECTION : B-B

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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