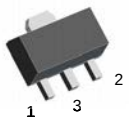
产品特点

最大输出电流：500mA
压差电压：160mV@50mA
最大工作电压：7V
输出电压范围：3.3V
高精度：3%
极低的静态工作电流：8μA (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



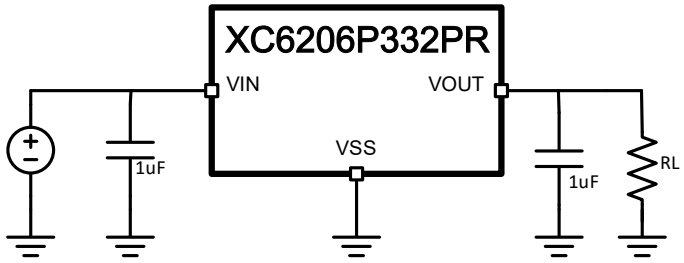


SOT-89

产品描述

XC6206P252MR 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（8.0μA Typ.），它们能在输入、输出电压差极小的情况下提供500mA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

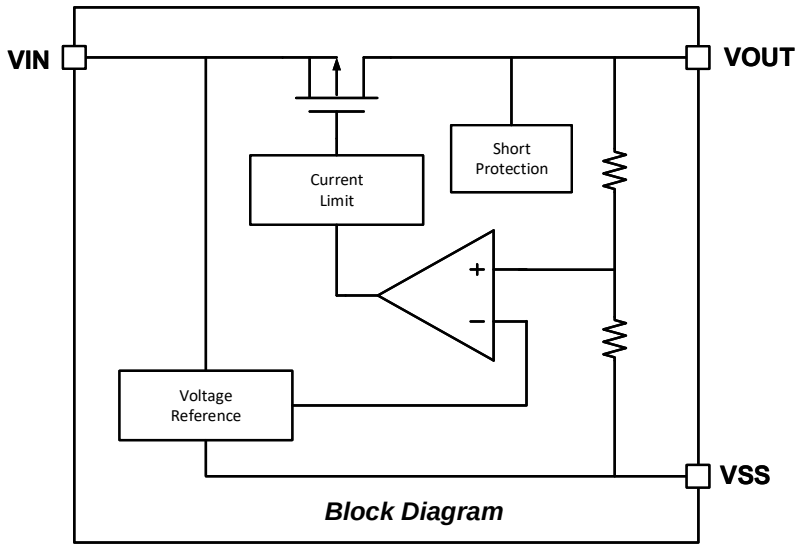


极限参数

(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}	7	V
输出电流	I_{OUT}	500	mA
输出电压	V_{OUT}	VSS-0.3~VIN+0.3	V
功　耗	P_d	0.50	W
工作温度	T_{opr}	-25~+80	℃
存储温度	T_{stg}	-40~+125	℃

功能框图



Block Diagram

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			8		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。

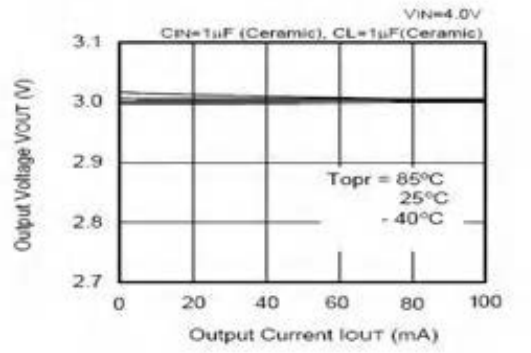
4、Vdrop= V_{IN1} - V_{OUT} (E)s ：V_{IN1}=逐渐减小输入电压， 当输出电压降为 V_{OUT} (E)1 的 98%时的输入电压。

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

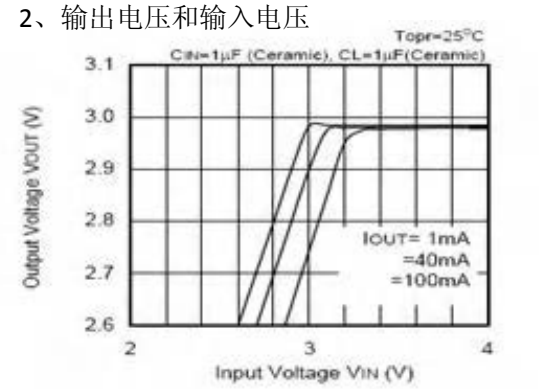
V_{OUT} (E)1=当 V_{IN}= $V_{OUT}(T)$+1V , Iout=某一数值时的输出电压值。

RATING AND CHARACTERISTIC CURVES

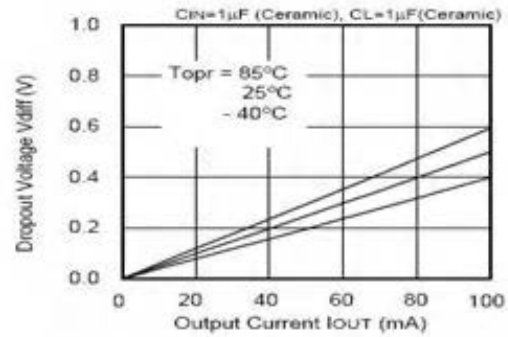
1、输出电压--输出电流（负载电流增加时）



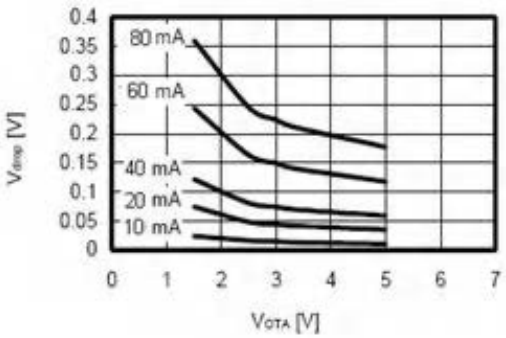
2、输出电压和输入电压



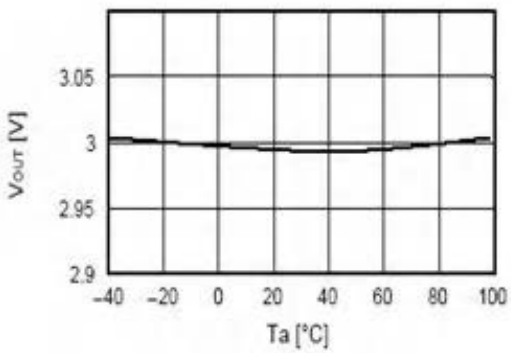
3、Dropout 电压和输出电流



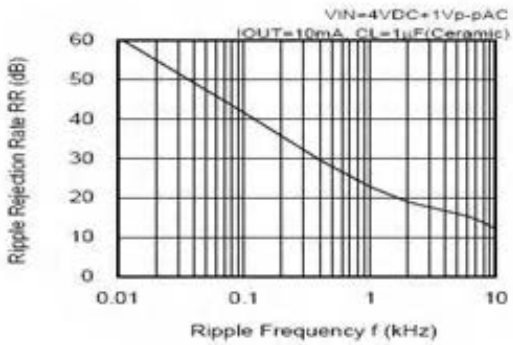
4、Dropout 电压和输出电压



5、输出电压和温度

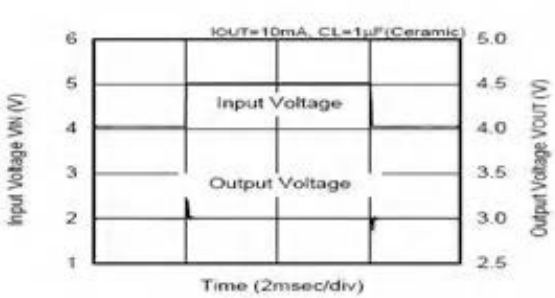


6、纹波抑制

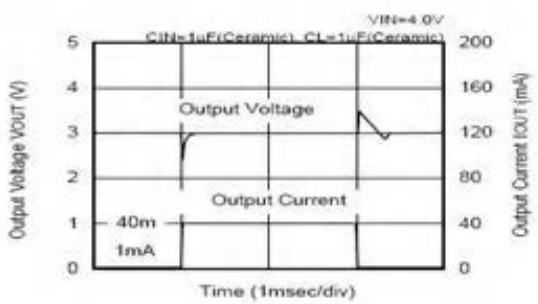


7、瞬态响应

输入过渡响应特性



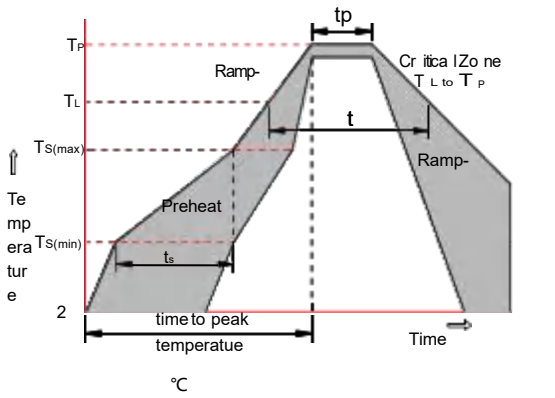
负载过渡输入响应特性



Soldering parameters

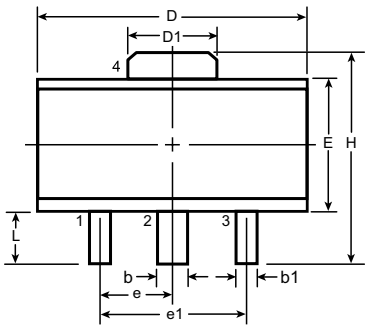
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid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

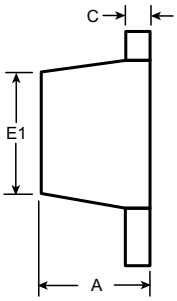


Package Dimensions & Suggested Pad Layout

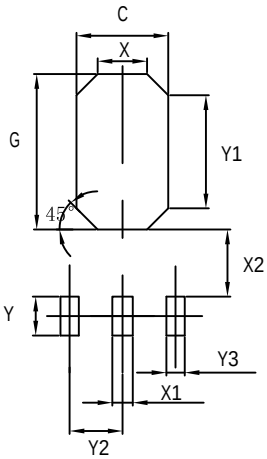
SOT89



Top View



Side View

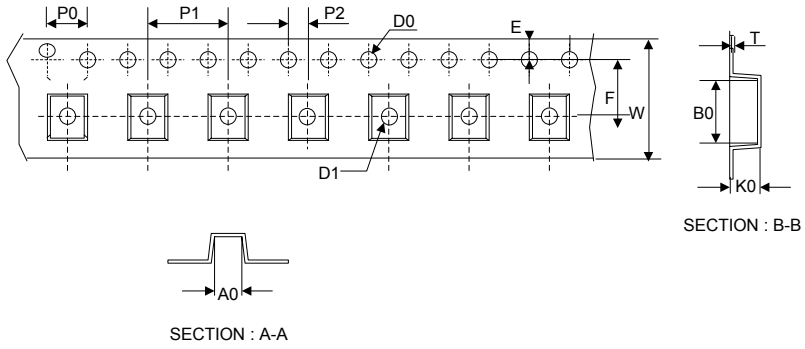


Symbol		A	b	b1	C	D	D1	E	E1	e	e1	H	L
Dimensions (mm)	MIN	1.40	0.44	0.36	0.3	4.40	1.50	2.29	2.00†	1.50 BSC	3.00 BSC	3.94	0.89
	NOM	-	-	-	-	-	-	-	-			-	-
	MAX	1.60	0.56	0.48	0.5	4.60	1.75	2.60	2.29			4.25	1.20

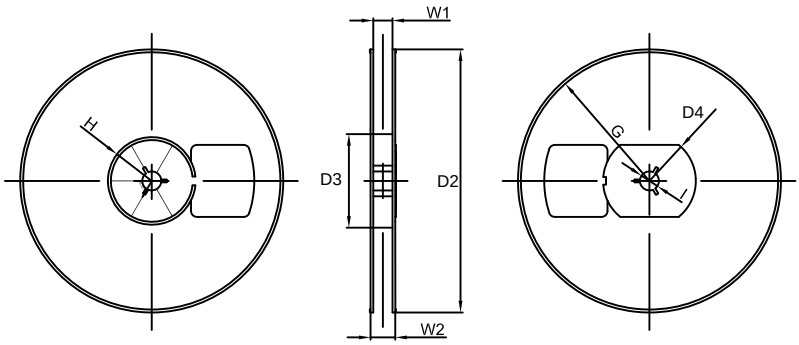
Dimensions	Value (in mm)
C	2.50
G	3.60
X	1.40
X1	0.90
X2	0.90
Y	1.40
Y1	2.60
Y2	1.50
Y3	0.90

Tape & rell specification

Tape



13” Reel



Symbol	Dimension (mm)
P0	4.00±0.20
P1	8.00±0.20
P2	2.00±0.20
D0	1.60±0.20
D1	1.60±0.20
E	1.75±0.20
F	7.50±0.15
W	16.00±0.20
A0	6.30±0.20
B0	8.25±0.20
K0	2.60±0.20
T	0.23±0.10
D2	180.0±5.0
D3	60Min.
D4	R32.0±2.0
G	R86.5±2.0
H	R30.0±2.0
I	13.0±2.0
W1	13.20±2.0
W2	16.50±2.0
Quantity: 1000PCS	

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