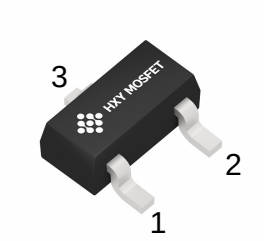
产品描述

XC6206P282MR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（3.0μA 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。



SOT-23

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

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：2.8V
- 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℃

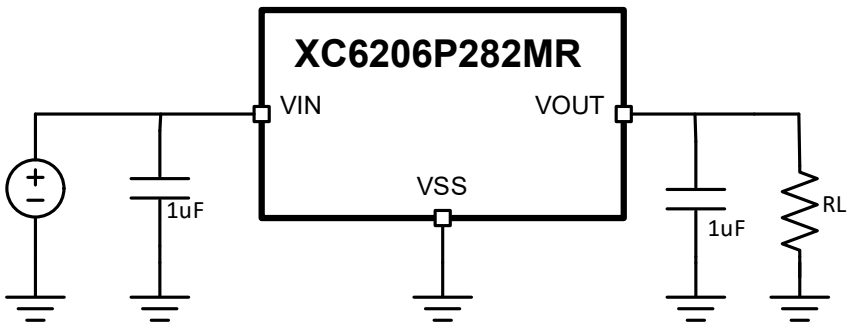
应用领域

- 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

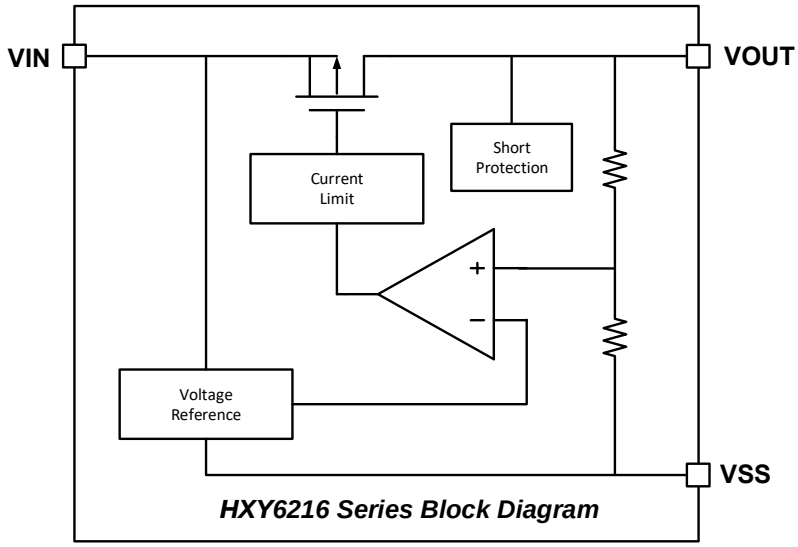
应包装标识与订购信息

产品型号	封装规格	丝印	数量信息(PCS)
XC6206P282MR	SOT-23	54FK	3000

典型应用



功能框图



HXY6216 Series Block Diagram

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	℃

电学参数

(V_{IN}S=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

特征曲线

(3.3V output)

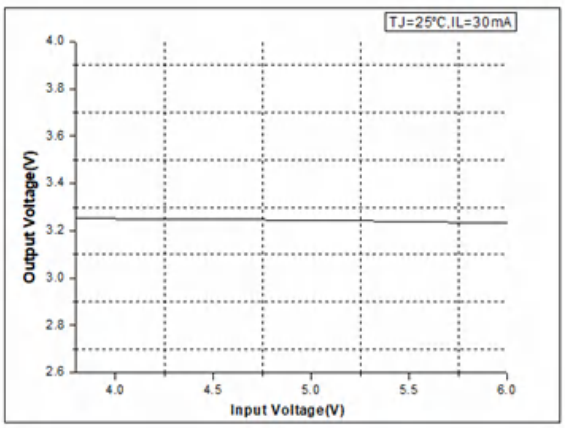


图1 输出电压和输入电压关系

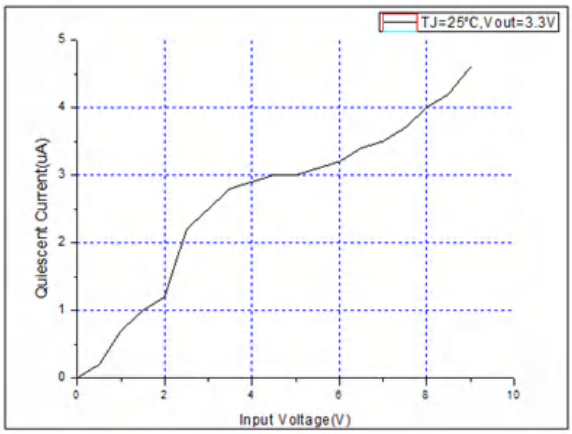


图2 静态功耗和输入电压关系

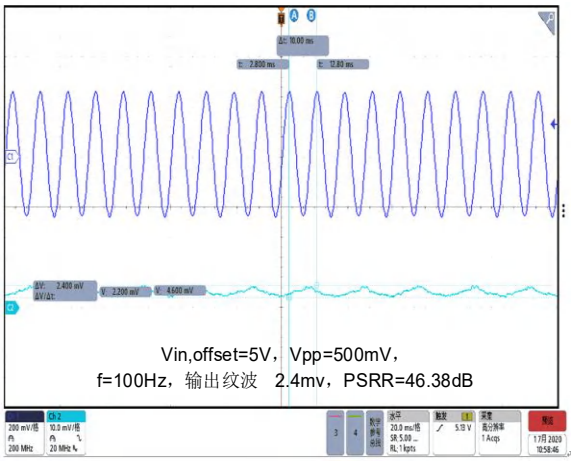


图3 纹波抑制比（f=100Hz）

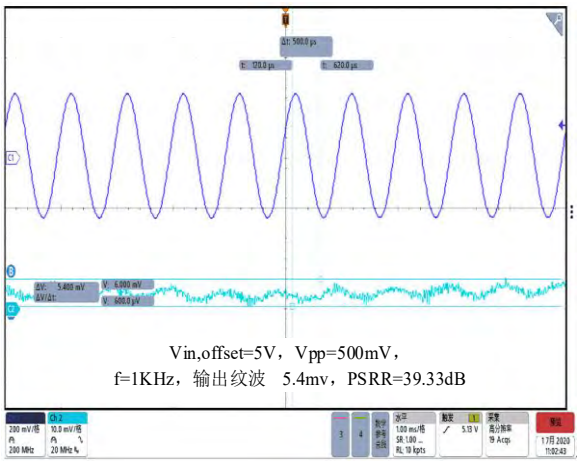


图4 纹波抑制比（f=1KHz）

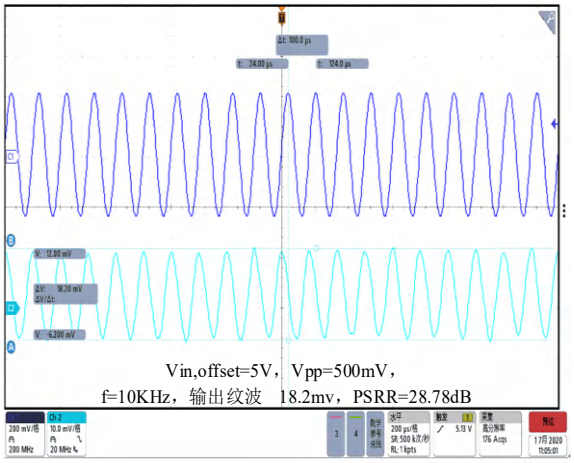


图5 纹波抑制比（f=10Hz）

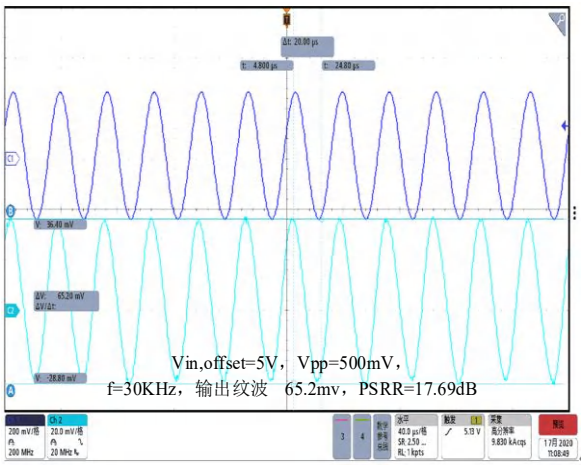
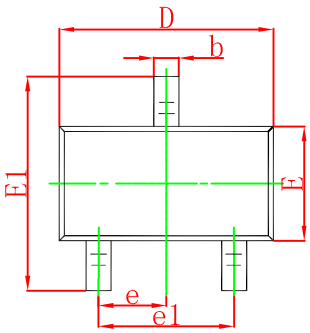
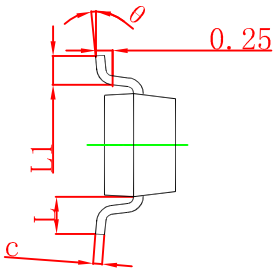
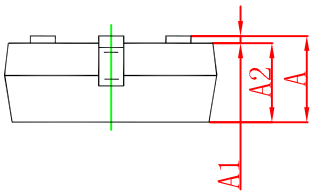


图6 纹波抑制比（f=30Hz）

SOT-23 Package Outline Dimensions

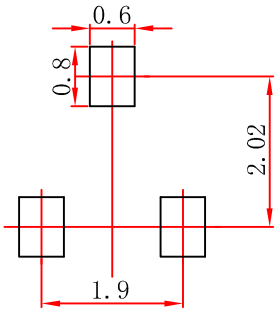






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 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°

SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

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