



■ 产品简介

XC6204系列是以CMOS工艺制造的高精度，低噪音，快速响应低压差线性稳压器。该系列的稳压器内置固定的参考电压，误差修正电路，限流电路，相位补偿电路以及低内阻的MOSFET，达到高纹波抑制，低输出噪音，快速响应低压差的性能。

XC6204系列兼容体积比钽电容更小的陶瓷电容，而且不需使用 $0.1\mu\text{F}$ 的By-pass电容，更能节省空间，降低了成本。因具有高精度的输出稳定性，以及快速瞬态响应性能，从而能应付负载电流的波动，所以特别适合应用在手持设备及射频产品上。

通过控制芯片上的CE脚，可将输出关断，关断输出后的静态电流只有 $0.1\mu\text{A}$ （Typ值），从而大大降低了功耗。

■ 产品特点

- 输出范围：1.8V-5.0V
- 300mA 输出电流
- 高电源抑制比：75分贝1千赫
- 极低的静态偏置电流：25 μA （典型）
- 交界处的温度运作为-20°C至+60°C
- XC6204采用 SOT-23-5L 封装

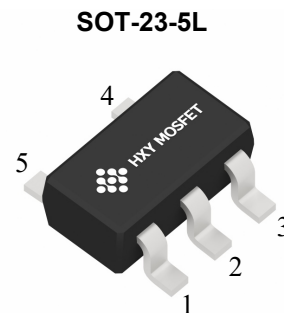
■ 产品用途

- CDMA / GSM 移动电话
- PDAs/MP3
- WLAN 和蓝牙设备
- 无绳电话
- 电池供电系统

■ 型号介绍

型号名	封装	输出电压	包装信息
XC6204B182MR	SOT-23-5L	1.8V	3000/盘
XC6204B252MR	SOT-23-5L	2.5V	3000/盘
XC6204B282MR	SOT-23-5L	2.8V	3000/盘
XC6204B302MR	SOT-23-5L	3.0V	3000/盘
XC6204B332MR	SOT-23-5L	3.3V	3000/盘
XC6204B362MR	SOT-23-5L	3.6V	3000/盘
XC6204B502MR	SOT-23-5L	5.0V	3000/盘

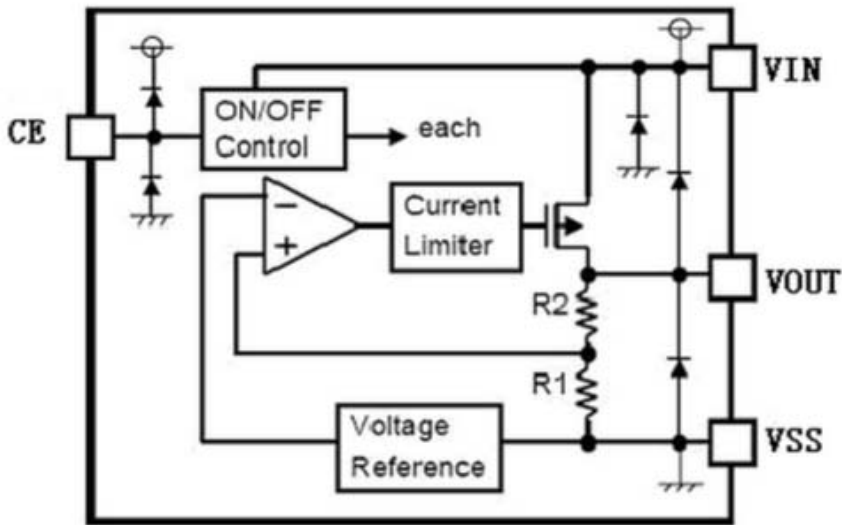
■ 封装形式和管脚定义功能



PIN脚位	符号	功能说明
SOT-23-5L		
1	V_{IN}	电源输入端
2	V_{SS}	地
3	CE	使能端
4	NC	悬空
5	V_{OUT}	电源输出端



■ 功能框图

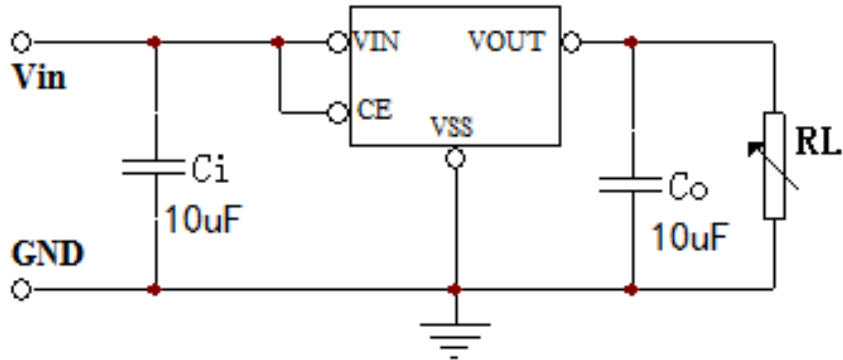


■ 极限参数

项目	符号	说明	极限值	单位
电压	Vin	输入电压	8	V
	Vout	输出电压	Vss-0.3~Vin+0.3	V
电流	Iout	输出电流	500	mA
功耗	PD	最大允许功耗	220	mW
温度	T _{OPR}	工作温度	-20~+60	°C
	T _{stg}	存储温度	-40~+125	°C
	T _{solder}	焊接温度	260°C, 10s	

注：极限参数是指无论在任何条件下都不能超过的极限值。万一超过此极限值，将有可能造成产品劣化等物理性损伤；同时在接近极限参数下，不能全部保证芯片可以正常工作。

■ 典型应用





■ 电学特性

XC6204

($V_{IN}=V_{OUT}+1V$, $C_{IN}=1\mu F \sim 10\mu F$, $C_{OUT}=1\mu F \sim 10\mu F$, $T_a=25^{\circ}C$ 。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	$V_{OUT}(E)$ (Note 2)	$I_{OUT}=40mA$, $V_{IN}=V_{OUT}+1V$	X 0.98	$V_{OUT}(T)$ (Note 1)	X 1.02	V
输入电压	V_{IN}				6.0	V
最大输出电流	I_{OUTmax}	$V_{IN}=V_{OUT}+1V$		300		mA
负载特性	ΔV_{OUT}	$V_{IN}=V_{OUT}+1V$, $1mA \leq I_{OUT} \leq 100mA$		20		mV
压差 (Note 3)	V_{dif1}	$I_{OUT}=100mA$		35		mV
	V_{dif2}	$I_{OUT}=200mA$		280		mV
静态电流	I_{SS}	$V_{IN}=V_{CE}=5V$		25		μA
关断电流	I_{CEL}	$V_{ce}=0V$		1		μA
电源电压调整率	$\frac{\Delta V_{OUT}}{\Delta V_{IN} \cdot V_{OUT}}$	$I_{OUT}=40mA$ $V_{OUT}+1V \leq V_{IN} \leq 8V$		0.2		%/V
输出噪声	en	$I_{OUT}=40mA$, 300Hz~50kHz		50		μV_{rms}
纹波抑制比	PSRR	$V_{IN}=[V_{OUT}+1]V$ $+1V_{p-p}AC$ $I_{OUT}=40mA, f=1kHz$		75		dB

注释: 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、 V_{dif} : $V_{IN1}-V_{OUT}(E)'$

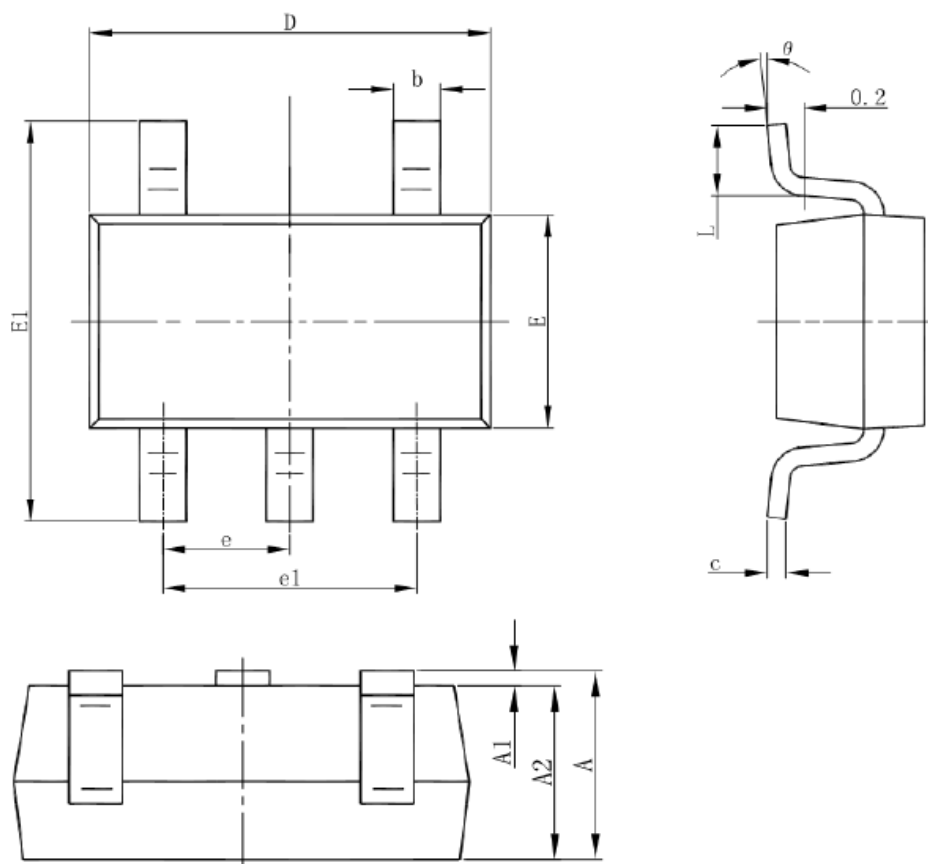
V_{IN1} : 逐渐减小输入电压, 当输出电压降为 $V_{OUT}(E)$ 98% 时的输入电压。

$V_{OUT}(E)'=V_{OUT}(E) \times 98\%$ 。



■ 封装信息

SOT-23-5L



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°



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