概述

LP5907MFX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。

LP5907MFX系列兼容体积比钽电容更小的陶瓷电容，而且不需使用0.1μF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0.1μA（Typ值），从而大大降低了功耗。

特点

◆输出范围：1.2V-3.6V
◆300mA输出电流
◆高电源抑制比：70分贝1千赫
◆极低的静态偏置电流:70uA（典型）
◆在关机模式下小于1μA
◆交界处的温度运作为-40°C至+85°C

应用场合

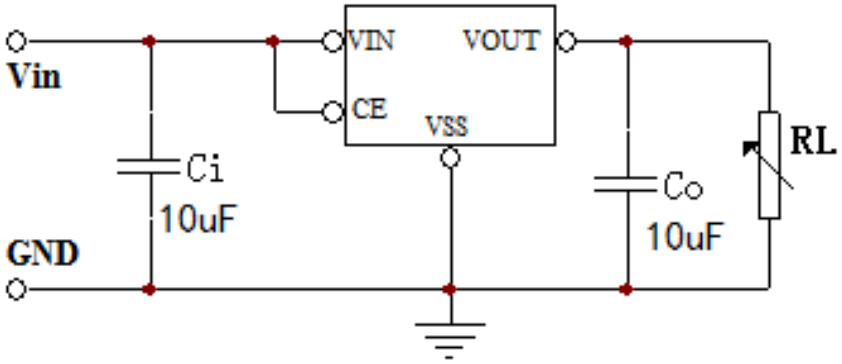
◆CDMA / GSM 移动电话
◆PDAs/MP3
◆WLAN和蓝牙设备
◆无线电话
◆电池供电系统

封装形式

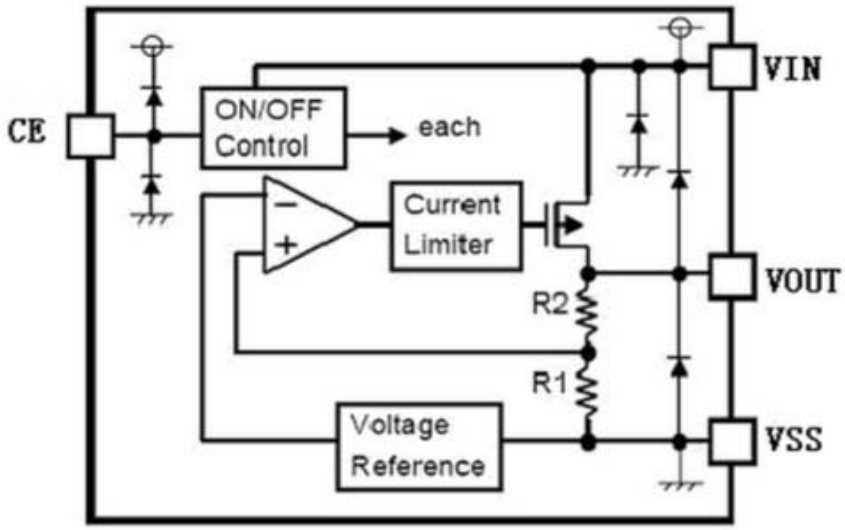
SOT-23-5L

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

典型应用图



功能框图



绝对最大额定值

项目	符号	说明	极限值	单位
电压	Vin	输入电压	6	V
	Vout	输出电压	Vss-0.3～Vin+0.3	V
电流	Iout	输出电流	450	mA
功耗	PD	最大允许功耗	300	mW
温度	T_{OPR}	工作温度	-20～+85	℃
	T_{stg}	存储温度	-40～+125	℃
	T_{solder}	焊接温度	260℃, 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。

电气参数

(Vin=Vout+1V,Cin=1uF~10uF,Cout=1uF~10uF,Ta=25℃。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}=Vout+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_{OUT}max	V_{IN}=Vout+1V		300		mA
负载特性	ΔV_{OUT}	V_{IN}=Vout+1V, 1mA≤I_{OUT}≤100mA		50		mV
压差 (Note 3)	V_{dif1}	I_{OUT} =100mA		90		mV
	V_{dif2}	I_{OUT} =200mA		230		mV
静态电流	I_{SS}	V_{IN}=Vout+1V		70		μA
关断电流	I_{CEL}	Vce＝0V		1		μA
电源电压调整率	$\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$	I_{OUT} =40mA Vout+1V ≤V_{IN}≤8V		0.05		%/V
输出噪声	en	I_{OUT} =40mA, 300Hz~50kHz		50		uVrms
纹波抑制比	PSRR	Vin= [Vout+1]V +1Vp-pAC I_{OUT} =40mA,f=1kHz		70		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。

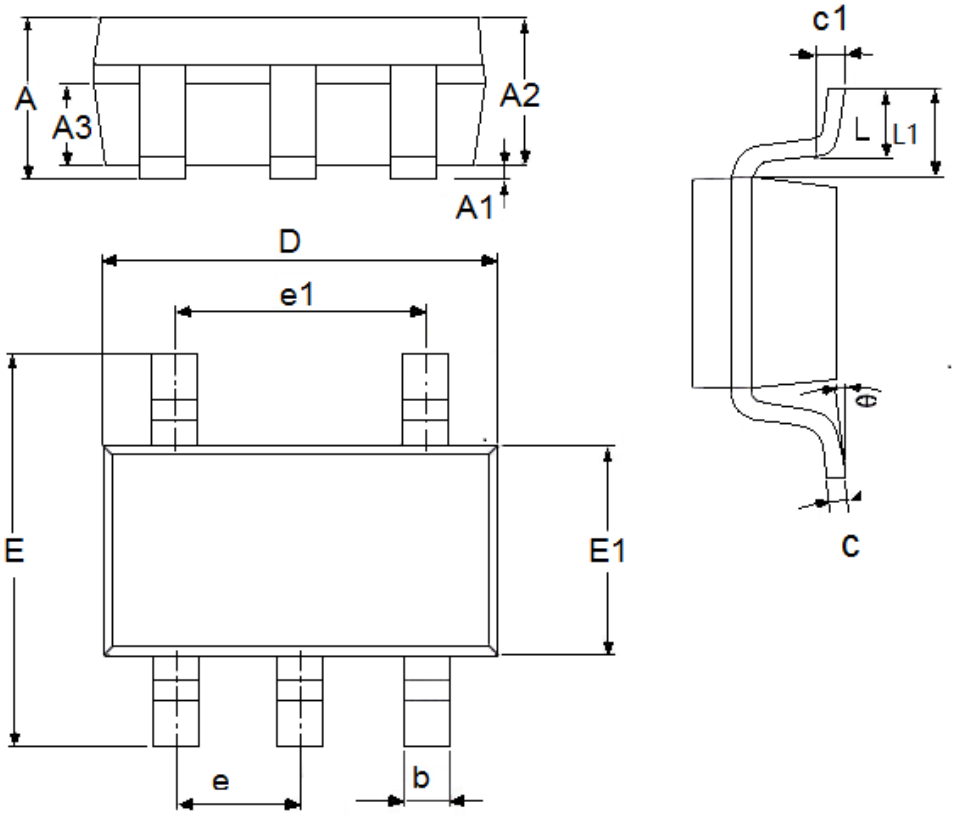
3、 V_{dif} ： V_{IN1} - V_{OUT} (E)'

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)X98% 。

封装信息

- **SOT-23-5L**



参数	尺寸（mm）		尺寸（Inch）	
	最小值	最大值	最小值	最大值
A	1.05	1.45	0.0413	0.0571
A1	0	0.15	0.0000	0.0059
A2	0.9	1.3	0.0354	0.0512
A3	0.6	0.7	0.0236	0.0276
b	0.25	0.5	0.0098	0.0197
c	0.1	0.23	0.0039	0.0091
D	2.82	3.05	0.1110	0.1201
e1	1.9(TYP)		0.0748(TYP)	
E	2.6	3.05	0.1024	0.1201
E1	1.5	1.75	0.0512	0.0689
e	0.95(TYP)		0.0374(TYP)	
L	0.25	0.6	0.0098	0.0236
L1	0.59(TYP)		0.0232(TYP)	
θ	0	8°	0.0000	8°
c1	0.2(TYP)		0.0079(TYP)	

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