

AMOS

低压差 CMOS 电压稳压器
AM73XX 系列 300mA

Low Dropout CMOS Voltage Regulator
AM73XX Series 300mA

AM73XX 系列是使用 CMOS 技术开发的低压差型正电压稳压电路。具有高输出电压精度，低静态功耗电流，输出电流 300mA，且最高工作电压可达 15V 的特点。

The AM73XX series is a family of Low Dropout Positive regulators, using CMOS technology.

Having high output voltage accuracy, low quiescent current, Output current 300mA, allow operation voltage as high as 15V.

产品特点:

- | | | | |
|------------|--------------|---|-----------|
| • 高输出电压精度 | 精度 $\pm 2\%$ | • high output voltage accuracy | $\pm 2\%$ |
| • 低输入输出电压差 | 典型值 5mV | • low dropout voltage | 5mV |
| • 低功耗电流 | 典型值 2.0uA | • low quiescent current | 2.0uA |
| • 高输入耐压 | 最大 15V | • Max input voltage | 15V |
| • 输出电流 | 典型值 300mA | • Output current | 300mA |
| • 内置短路限流电路 | | • Built_in short current limit circuits | |

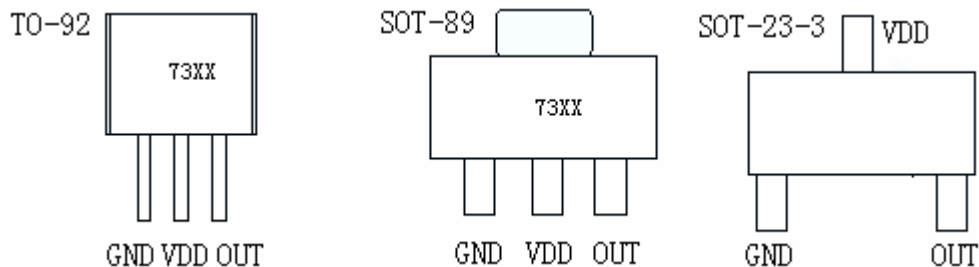
产品选录: Selection table

型号(Part NO.)	输出电压 (Output voltage)	误差(Tolerance)
AM7315	1.5V	$\pm 2\%$
AM7330	3.0V	$\pm 2\%$
AM7333	3.3V	$\pm 2\%$
AM7336	3.6V	$\pm 2\%$
AM7344	4.4V	$\pm 2\%$
AM7350	5.0V	$\pm 2\%$

注: (一)可提供客户半定制产品, 选择范围 1.5~12V 每 0.1V 步进细分。

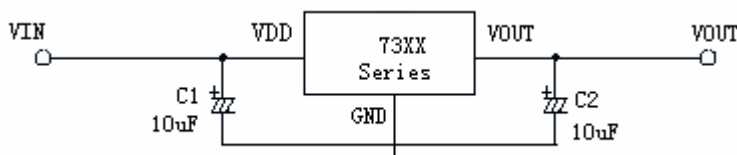
NOTE: for semi-custom parts selectable output voltage from 1.5~12V in 0.1v increment

封装型式和管脚 (Package and Pin Assignment)



基本应用电路

Application Circuits:



绝对最大额定值 **Absolute Maximum Ratings:**

(除特殊注明以外: Ta=25°C)

(Ta=25°C unless otherwise specified)

项目 Item	记号 Symbol	绝对最大额定值 Absolute Maximum Ratings		单位
输入电压 Input voltage	V _{IN}	18		V
输出电压 Output voltage	V _{OUT}	GND-0.3~ V _{IN} +0.3		
容许功耗 Power dissipation	Pd	TO_92 SOT-89	300	
		SOT_23_3	250	
工作周围温度范围 Operation temperature range	T _{opr}	-40~+85		°C
保存周围温度范围 Storage temperature range	T _{stg}	-40~+125		

电气特性 **Electrical Characteristics:**

项目 ITEM	记号 SYMBOL	条件 CONDITIONS	型号 PART NO.	最小值 MIN	典型值 TYPE	最大值 MAX	单位 UNITS
输出电压*1 Output voltage	V _{OUT}	V _{IN} =V _{OUT(S)} +2V, I _{OUT} =30mA	AM7315	1.470	1.5	1.530	V
			AM7330	2.940	3.0	3.060	
			AM7333	3.234	3.3	3.366	
			AM7336	3.528	3.6	3.672	
			AM7344	4.312	4.4	4.488	
			AM7350	4.900	5.0	5.100	
输出电流*2 Output current	I _{OUT}	V _{IN} = V _{OUT(S)} +2V	AM7315	50	100	--	mA
			V _{out} >2.5V	250	300		mA
输入输出电压差*3 Dropout voltage	V _{drop}	I _{OUT} =1 mA	MD7315--	--	90	150	mV
		I _{OUT} =5 0mA	MD7315-		500	650	
		I _{OUT} =1 mA	V _{out} >2.5V		3	6	
		I _{OUT} =5 0mA	V _{out} >2.5V-	--	100	150	
输入稳定度 Line regulation	$\frac{\Delta V_{OUT}}{\Delta V_{IN} \cdot V_{OUT}}$	6V≤V _{IN} ≤15V I _{out} =30mA	--	--	0.05 --	0.2	%/V
负载稳定度 Load regulation	ΔV_{OUT}	1.0mA≤I _{OUT} ≤ 100mA	--		50	100	mV
输出电压温度系数 Temperature coefficient	$\frac{\Delta V_{OUT}}{\Delta T_a \cdot V_{OUT}}$	V _{IN} =V _{OUT(S)} +2V , I _{OUT} =10mA -40°C≤T _a ≤85°C	--	--	±50	±100	m/°C
电流消耗 Current consumption	I _{SS}	V _{IN} = 15V NO LOAD	--	--	1.2	2.5	uA
输入电压 Input voltage	V _{IN}	I _{OUT} =1mA	--	--	--	15	V
输出短路电流 Short current limit	I _{lim}	V _{out} =0V				15 50	mA

*1. V_{OUT(S)} 设定输出电压值. *2.缓慢增加输出电流, 当输出电压下降 5%时的输出电流值

*3.缓慢下降输入电压, 当输出电压下降 2%时的输入输出电压差.

*1. V_{OUT(S)} Specified output voltage.

*2.Increasing output current slowly, The I_{OUT} when output voltage decreasing five percent.

*3.Decreasing Vin, the dropout is (V_{IN}-V_{OUT}) when output voltage decreasing two percent