贴片三端稳压器 NSP- 79L系列

※ 概述

NSP-79LXX 系列三端稳压器有效利用几个固定电压得到较宽的应用范围，可替代混合的齐纳二极体和电阻，并比其拥有更低的静态电流。适合 100mA 的各种稳压要求。NSP-79LXX 这些电压可以用在逻辑系统，检测仪器，HIFI，和其他电子设备。可以替代过热保护 IC。

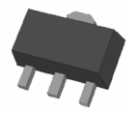
封装：SOT-89

输出电压精度±5%

输出电流 100mA

内置过流保护功能

输出电压-5.0V, -6.0V, -8.0V, -9.0V, -10V, -12V, -15V,

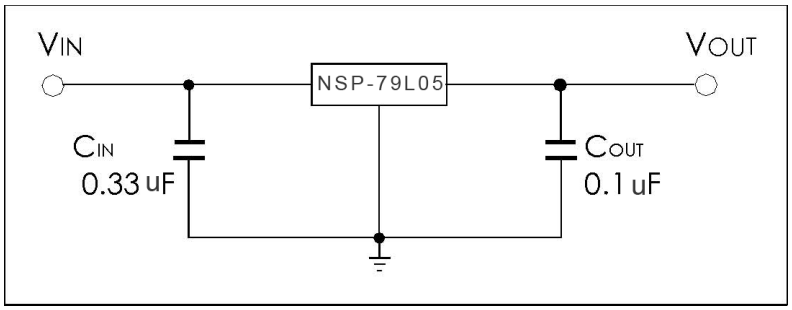


1.Gnd 2. Vin 3. Vout

※ 最大额定值 (Ta=25℃)

特性参数	符合	额定值		单位
		最小值	最大值	
功耗	P_D		0.5	W
输入电压	V_{IN}		-35	V
工作温度	Topt	-0	125	℃
存储温度	Tstg	-55	150	℃
注意：绝对最大值是一个极限值,在任何情况下即使极短的时间亦不能被超过。而且，任何两项的绝对值都不能同时达到极限.任何超越最大值操作,将会引起器件永久损坏。这仅仅是重要的范围值,但并不意味著所有的功能操作必须在此极限值下去做。				

※ 典型应用图例



※ NSP-79L05

Unless otherwise specified, Vin= -10V, Iout=40mA, Cin=0.33uF, Cout=0.1uF, Tj=0℃to125℃

CHARACTERISTIC	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	Vout	Tj=25℃		-5.2	-5.0	-4.8	V
Input Regulation	Reg line	Tj=25℃	-20V≤Vin≤-7.0V	-	55	150	mV
			-20V≤Vin≤-8.0V	-	45	100	
Load Regulation	Reg load	Tj=25℃	1.0mA≤Iout≤ 100mA	-	11	60	mV
			1.0mA≤Iout≤ 40mA	-	5.0	30	
Output Voltage	Vout	-20V≤Vin≤-7.0V 1.0mA≤ Iout≤40mA		-5.25	-	-4.75	V
		Vin=-10V, 1.0mA≤Iout≤ 70mA		-5.25	-	-4.75	
Quiescent Current	I_Q	Tj=25℃		-	3.1	6.0	mA
		Tj=125℃		-	-	5.5	
Quiescent Current	$\triangle I_Q$	-20V≤Vin≤-8.0V		-	-	1.5	mA
Change		1.0mA ≤Iout≤40mA		-	-	0.1	
Output Noise Voltage	V_{NO}	Ta=25℃, 10Hz ≤f≤100kHz		-	40	-	uVrms
Long Term Stability	$\triangle Vout/\triangle t$			-	12	-	mV/1.0kHrs
Ripple Rejection Ratio	RR	f=120Hz, -18V≤Vin≤-8.0V Tj=25℃		41	49	-	dB
Dropout Voltage	|Vin-Vout|	Tj=25℃,Iout=40mA			1.7		V
Average Temperature Coefficient of Output Voltage	TCvo	Iout=5mA		-	-0.6	-	mV/℃

※ NSP-79L06

less otherwise specified ,Vin= -11V, Iout=40mA, Cin=0.33uF, Cout=0.1uF , Tj=0℃to125℃

CHARACTERISTIC	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	Vout	Tj=25℃		-6.24	-6.0	-5.75	V
Input Regulation	Reg line	Tj=25℃	-21V≤Vin≤-8.1V	-	50	150	mV
			-21V≤Vin≤-9.0V	-	45	110	
Load Regulation	Reg load	Tj=25℃	1.0mA≤Iout≤ 100mA	-	12	70	mV
			1.0mA≤Iout≤ 40mA	-	5.5	35	
Output Voltage	Vout	-21V≤Vin≤-8.1V 1.0mA≤Iout≤40mA		-6.3	-	-5.7	V
		Vin=-11V, 1.0mA≤Iout≤ 70mA		-6.3	-	-5.7	
Quiescent Current	I_Q	Tj=25℃		-	3.1	6.0	mA
		Tj=125℃		-	-	5.5	
Quiescent Current	$\triangle I_Q$	-20V≤Vin≤-9.0V		-	-	1.5	mA
Change		1.0mA≤Iout≤40mA		-	-	0.1	
Output Noise Voltage	V_{NO}	Ta=25℃ 10Hz ≤ f ≤ 100kHz		-	40	-	uVrms
Long Term Stability	$\triangle Vout/\triangle t$			-	14	-	mV/1.0kHrs
Ripple Rejection Ratio	RR	F=120Hz, -19V≤Vin≤-9.0V Tj=25℃		39	47	-	dB
Dropout Voltage	|Vin-Vout|	Tj=25℃,Iout=40mA			1.7		V
Average Temperature Coefficient of Output Voltage	TCvo	Iout=5mA		-	-0.7	-	mV/℃

※ NSP-79L08

Unless otherwise specified ,Vin= -14V, Iout=40mA, Cin=0.33uF, Cout=0.1uF , Tj=0℃to125℃

CHARACTERISTIC	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	Vout	Tj=25℃		-8.3	-8.0	-7.7	V
Input Regulation	Reg line	Tj=25℃	-23V≤Vin≤-10.5V,	-	20	175	mV
			-23V≤Vin≤-11V,	-	12	125	
Load Regulation	Reg load	Tj=25℃	1.0mA≤Iout≤ 100mA	-	15	80	mV
			1.0mA≤Iout≤ 40mA	-	7.0	40	
Output Voltage	Vout	-23V≤Vin≤-10.5V, 1.0mA≤Iout≤40mA		-8.4	-	-7.6	V
		Vin=-14V, 1.0mA≤Iout≤70mA		-8.4	-	-7.6	
Quiescent Current	I_Q	Tj=25℃		-	3.1	6.5	mA
		Tj=125℃		-	-	6.0	
Quiescent Current	$\triangle I_Q$	-23V≤Vin≤-11V,		-	-	1.5	mA
Change		1.0mA≤Iout≤40mA		-	-	0.1	
Output Noise Voltage	V_{NO}	Ta=25℃, 10Hz ≤f≤100kHz		-	60	-	uVrms
Long Term Stability	$\triangle Vout/\triangle t$			-	20	-	mV/1.0kHrs
Ripple Rejection Ratio	RR	F=120Hz, -23V≤Vin≤-12V, Tj=25℃		37	45	-	dB
Dropout Voltage	|Vin-Vout|	Tj=25℃			1.7		V
Average Temperature Coefficient of Output Voltage	TCvo	Iout=5mA		-	-0.8	-	mV/℃

※ NSP-79L09

Unless otherwise specified ,Vin= -15V, Iout=40mA, Cin=0.33uF, Cout=0.1uF , Tj=0℃to125℃

CHARACTERISTIC	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	Vout	Tj=25℃		-9.36	-9.0	-8.64	V
Input Regulation	Reg line	Tj=25℃	-24V≤Vin≤-11.4V,	-	80	200	mV
			-24V≤Vin≤-12V,	-	20	160	
Load Regulation	Reg load	Tj=25℃	1.0mA≤Iout≤ 100mA	-	17	90	mV
			1.0mA≤Iout≤ 40mA	-	8.0	45	
Output Voltage	Vout	-24V≤Vin≤-11.4V, 1.0mA≤Iout≤40mA		-9.45	-	-8.55	V
		Vin=-15V, 1.0mA≤Iout≤70mA		-9.45	-	-8.55	
Quiescent Current	I_Q	Tj=25℃		-	3.2	6.5	mA
		Tj=125℃		-	-	6.0	
Quiescent Current	$\triangle I_Q$	-24V≤Vin≤-12V,		-	-	1.5	mA
Change		1.0mA≤Iout≤40mA		-	-	0.1	
Output Noise Voltage	V_{NO}	Ta=25℃, 10Hz ≤f≤100kHz		-	65	-	uVrms
Long Term Stability	$\triangle Vout/\triangle t$			-	21	-	mV/1.0kHrs
Ripple Rejection Ratio	RR	F=120Hz, -24V≤Vin≤-12V, Tj=25℃		36	44	-	dB
Dropout Voltage	|Vin-Vout|	Tj=25℃,Iout=40mA			1.7		V
Average Temperature Coefficient of Output Voltage	TCvo	Iout=5mA			0.85	-	mV/℃

※ NSP-79L10

Unless otherwise specified ,Vin= -16V, Iout=40mA, Cin=0.33uF, Cout=0.1uF , Tj=0℃to125℃

CHARACTERISTIC	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	Vout	Tj=25℃		-10.4	-10	-9.6	V
Input Regulation	Reg line	Tj=25℃	-25V≤Vin≤-12.5V,	-	80	230	mV
			-25V≤Vin≤-13V,	-	30	170	
Load Regulation	Reg load	Tj=25℃	1.0mA≤Iout≤ 100mA	-	18	90	mV
			1.0mA≤Iout≤ 40mA	-	8.5	45	
Output Voltage	Vout	-25V≤Vin≤-12.5V, 1.0mA≤Iout≤40mA		-10.5	-	-9.5	V
		Vin=-16V, 1.0mA≤Iout≤70mA		-10.5	-	-9.5	
Quiescent Current	I_Q	Tj=25℃		-	3.2	6.5	mA
		Tj=125℃		-	-	6.0	
Quiescent Current	$\triangle I_Q$	-25V≤Vin≤-13V,		-	-	1.5	mA
Change		1.0mA≤Iout≤40mA		-	-	0.1	
Output Noise Voltage	V_{NO}	Ta=25℃, 10Hz ≤f≤100kHz		-	70	-	uVrms
Long Term Stability	$\triangle Vout/\triangle t$			-	22	-	mV/1.0kHrs
Ripple Rejection Ratio	RR	F=120Hz, -24V≤Vin≤-13V, Tj=25℃		37	43	-	dB
Dropout Voltage	|Vin-Vout|	Tj=25℃, Iout=40mA			1.7		V
Average Temperature Coefficient of Output Voltage	TCvo	Iout=5mA		-	-0.9	-	mV/℃

※ NSP-79L12

Unless otherwise specified ,Vin= -19V, Iout=40mA, Cin=0.33uF, Cout=0.1uF , Tj=0℃to125℃

CHARACTERISTIC	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	Vout	Tj=25℃		-12.5	-12	-11.5	V
Input Regulation	Reg line	Tj=25℃	-27V≤Vin≤-14.5V,	-	120	250	mV
			-27V≤Vin≤-16V,	-	100	200	
Load Regulation	Reg load	Tj=25℃	1.0mA≤Iout≤ 100mA	-	20	100	mV
			1.0mA≤Iout≤ 40mA	-	10	50	
Output Voltage	Vout	-27V≤Vin≤-14.5V, 1.0mA≤Iout≤40mA		-12.6	-	-11.4	V
		Vin=-19V, 1.0mA≤Iout≤70mA		-12.6	-	-11.4	
Quiescent Current	I_Q	Tj=25℃		-	3.2	6.5	mA
		Tj=125℃		-	-	6.0	
Quiescent Current	$\triangle I_Q$	-27V≤Vin≤-16V,		-	-	1.5	mA
Change		1.0mA≤Iout≤40mA		-	-	0.1	
Output Noise Voltage	V_{NO}	Ta=25℃, 10Hz ≤f≤100kHz		-	80	-	uVrms
Long Term Stability	$\triangle Vout/\triangle t$			-	24	-	mV/1.0kHrs
Ripple Rejection Ratio	RR	F=120Hz, -25V≤Vin≤-15V, Tj=25℃		36	41	-	dB
Dropout Voltage	|Vin-Vout|	Tj=25℃, Iout=40mA			1.7		V
Average Temperature Coefficient of Output Voltage	TCvo	Iout=5mA		-	-1.0	-	mV/℃

※ NSP-79L15

Unless otherwise specified ,Vin= -23V, Iout=40mA, Cin=0.33uF, Cout=0.1uF , Tj=0℃to125℃

CHARACTERISTIC	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Voltage	Vout	Tj=25℃		-15.6	-15	-14.4	V
Input Regulation	Reg line	Tj=25℃	-30V≤Vin≤-17.5V,	-	130	300	mV
			-30V≤Vin≤-20V,	-	110	250	
Load Regulation	Reg load	Tj=25℃	1.0mA≤Iout≤ 100mA	-	25	150	mV
			1.0mA≤Iout≤ 40mA	-	12	75	
Output Voltage	Vout	-30V≤Vin≤-17.5V, 1.0mA≤Iout≤40mA		-15.75	-	-14.25	V
		Vin=-23V, 1.0mA≤Iout≤70mA		-15.75	-	-14.25	
Quiescent Current	I_Q	Tj=25℃		-	3.3	6.5	mA
		Tj=125℃		-	-	6.0	
Quiescent Current	$\triangle I_Q$	-30V≤Vin≤-20V,		-	-	1.5	mA
Change		1.0mA≤Iout≤40mA		-	-	0.1	
Output Noise Voltage	V_{NO}	Ta=25℃, 10Hz ≤f≤100kHz		-	90	-	uVrms
Long Term Stability	$\triangle Vout/\triangle t$			-	30	-	mV/1.0kHrs
Ripple Rejection Ratio	RR	F=120Hz, -28.5V≤Vin≤-18.5V, Tj=25℃		34	40	-	dB
Dropout Voltage	|Vin-Vout|	Tj=25℃, Iout=40mA			1.7		V
Average Temperature Coefficient of Output Voltage	TCvo	Iout=5mA		-	-1.3	-	mV/℃