



• Three-terminal negative voltage regulator

Main purposes:

The role of regulator and protection for a variety of electrical appliances, electronic equipment, regulator circuit

Maximum Ratings

Para	ameter	Symbol	Ratings	Unit
Input voltage	79L05~79L15	Vı	-35	V
$(T_A=25^{\circ}C)$	79L18~79L24	v _I	-40	v
Output current		I_{O}	0.15	A
Total power dissip	pation $(T_A=25^{\circ}C)^{*}$	P_D	0.5	W
Work (tube shell)	temperature	T_{OP}	-40~85	$^{\circ}$
Storage temperatur	re	T_{stg}	-55~150	$^{\circ}$ C

Three-terminal fixed output voltage regulator

0.5W、0.15A、-5V~-24V



Note:Devices installed in good thermal environment

 $79L05 \; \textbf{Electrical characteristics} \; \; \textbf{(} \textbf{U}\textbf{nless otherwise specified} \; \; \textbf{0} \leqslant \textbf{T}\textbf{J} \leqslant +125\,^{\circ}\textbf{C} \; , \; \textbf{V}\textbf{J} = -10\textbf{V}, \; \; \textbf{I}\textbf{0} = 40\text{mA}, \; \; \textbf{C}\textbf{I} = 0. \; 33\mu\text{F}, \; \; \textbf{C}\textbf{0} = 0. \; 1\mu\text{R})$

Parameter name	Symbol	Test	Test Condition		Тур	Max	Unit
Outsut Valtage	N/	T _J =25 ℃		-4.8	-5	-5.2	V
Output Voltage	V_{O}	$1\text{mA} \leq I_0 \leq 40\text{mA}$,	$-7V \leq V_I \leq -20V$	-4.75	-5	-5.25	V
Voltage Degulation	6	T -25°C	-7V≤V _I ≤-20V	_		150	
Voltage Regulation	$S_{ m V}$	$T_J=25$ °C $-8V \leqslant V_I \leqslant -20V$	_	_	100	mV	
Current Regulation	S_{I}	T _J =25℃, 1mA≤I ₀	$T_J=25^{\circ}C$, $1mA \leq I_O \leq 100mA$		_	60	mV
Quiescent Current	IQ	T _J =25℃		_	_	6	mA
Outagonal Current Change	A =	$1\text{mA} \leq I_{O} \leq 40\text{mA}$		_	_	0.1	
Quiescent Current Change	$\triangle I_Q$	-8V≤V _I ≤-20V	-8V≤V _I ≤-20V		_	1.5	mA
Input - output differential pressure	$ V_I - V_O $	T _J =25℃		_	1.7	_	V
Ripple Rejection Ratio	Srip	-8V≤V _I ≤-18V; f	=120Hz	_	49	_	dB

79L06 Electrical characteristics (Unless otherwise specified $0 \le T_{\text{\tiny J}} \le +125\,^{\circ}\text{C}$, $V_{\text{\tiny I}} = -11V$, $I_{\text{\tiny 0}} = 40\text{mA}$, $C_{\text{\tiny I}} = 0.33\mu\text{F}$, $C_{\text{\tiny 0}} = 0.1\mu\text{R}$

Parameter name	Symbol	Test	Condition	Min	Тур	Max	Unit
Output Voltage	$V_{\rm o}$	T _J =25°C		-5.76	-6	-6.24	V
output vortuge	. 0	$1\text{mA} \leq I_{O} \leq 40\text{mA}$	-8.1V≤V _I ≤-21V	-5.7	-6	-6.3	•
V-14 D1-4:	6	T-25°C	-8.1V≤V _I ≤-21V	-	1	150	
Voltage Regulation	S_{V}	T _J =25°C	-9V≤V _I ≤-21V		1	110	mV
Current Regulation	$S_{\rm I}$	T _J =25°C, 1mA≤I0	T _J =25℃, 1mA≤I0≤100mA		Ţ	70	mV
Quiescent Current	I_Q	T _J =25°C		_		6	mA
Ovieseent Current Change	A.T.	1mA≤I _O ≤40mA		_	_	0.1	
Quiescent Current Change	$\triangle I_Q$	-9V≤V _I ≤-20V	-9V≤V _I ≤-20V			1.5	mA
Input - output differential pressure	$ V_{I}$ - $V_{O} $	T _J =25℃	T _J =25°C		1.7		V
Ripple Rejection Ratio	Srip	-9V≤V _I ≤-19V; f=	=120Hz	_	47		dB

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79L08 Electrical characteristics (Unless otherwise specified $0 \le T_{\downarrow} \le +125 ^{\circ}\text{C}$, $V_{i} = -14V$, $I_{0} = 40 \text{mA}$, $C_{i} = 0.33 \mu\text{F}$, $C_{0} = 0.1 \mu\text{F}$)

Parameter name	Symbol		Test Condition	Min	Тур	Max	Unit
Output Voltage	Vo	T _J =25℃		-7.7	-8	-8.3	V
Output Voltage	*0	1mA≤I ₀ ≤40	mA, -10.5V≤V _I ≤-23V	-7.6	-8	-8.4	V
V-14 D1-4	c	T. 25%	-10.5V≤V _I ≤-23V			175	37
Voltage Regulation	S_V	T _J =25℃	-11V≤V _I ≤-23V	_		125	mV
Current Regulation	S_{I}	T _J =25℃, 1m.	$A \leq I_O \leq 100 \text{mA}$	_	_	80	mV
Quiescent Current	I_Q	T _J =25℃				6.5	mA
Quiescent Current Change	$\triangle I_{O}$	1mA≤I ₀ ≤40	mA,	_		0.1	
Quiescent current change	ΔIQ	-11V≤V _I ≤-2	-11V≤V ₁ ≤-23V			1.5	mA
Input - output differential pressure	$ V_I - V_O $	T _J =25℃		_	1.7	_	V
Ripple Rejection Ratio	Srip	-12V≤V _I ≤-2	3V; f=120Hz		45	_	dB

79L09 Electrical characteristics (Unless otherwise specified $0 \le T_{\downarrow} \le +125 ^{\circ}\text{C}$, $V_{i} = -15V$, $I_{0} = 40\text{mA}$, $C_{i} = 0.33 \mu\text{F}$, $C_{0} = 0.1 \mu\text{F}$)

Parameter name	Symbol	Tes	st Condition	Min	Тур	Max	Unit
Output Voltage	V	T _J =25℃		-8.64	-9	-9.36	**
output vortage	V_{O}	$1 \text{mA} \leq I_{\text{O}} \leq 40 \text{m}$	A, -11.4V≤V _I ≤-24V	-8.55	-9	-9.45	V
Walters Daniels	c	T. 25%	-11.4V≤V _I ≤-24V	_	I	200	mV
Voltage Regulation	S_V	T _J =25 ℃	-12V≤V _I ≤-24V	_	-	160	
Current Regulation	$S_{\rm I}$	T _J =25℃, 1mA≤I ₀	_O ≤100mA	_		90	mV
Quiescent Current	I_Q	T _J =25℃		_	-	6.5	mA
Ouisseent Current Change	Λ1	1mA≤I _O ≤40mA		_		0.1	
Quiescent Current Change	$\triangle I_Q$	-12V≤V _I ≤-24V	-12V≤V _I ≤-24V		I	1.5	mA
Input - output differential pressure	$ V_I - V_O $	T _J =25℃		_	1.7		V
Ripple Rejection Ratio	Srip	-12V≤V _I ≤-24V;	f=120Hz	_	44	_	dB

79L10 Electrical characteristics (Unless otherwise specified $0 \le T_{\downarrow} \le +125 ^{\circ}\text{C}$, $V_{i} = -16V$, $I_{0} = 40 \text{mA}$, $C_{i} = 0.33 \mu\text{F}$, $C_{0} = 0.1 \mu\text{F}$)

Parameter name	Symbol		Test Condition			Max	Unit
Output Voltage	V	T _J =25℃		-9.6	-10	-10.4	V
output vortage	Vo	1mA≤I ₀ ≤40	mA, $-12.5V \leqslant V_I \leqslant -25V$	-9.5	-10	-10.5	V
Voltage Degulation	c	T 25%	-12.5V≤V _I ≤-25V	_	_	230	***
Voltage Regulation	S_{V}	T _J =25℃	-13V≤V _I ≤-25V	_	_	170	mV
Current Regulation	S_{I}	T _J =25℃, 1m.	$A \leq I_O \leq 100 \text{mA}$		_	90	mV
Quiescent Current	I_Q	T _J =25℃		_	_	6.5	mA
Outcomet Channel Channel	^ I	1mA≤I ₀ ≤40	mA	_		0.1	
Quiescent Current Change	$\triangle I_Q$	-13V≤V _I ≤-2	-13V≤V _I ≤-25V		_	1.5	mA
Input - output differential pressure	$ V_{l}$ - $V_{O} $	T _J =25℃			1.7	_	V
Ripple Rejection Ratio	Srip	-13V≤V ₁ ≤-2	4V; f=120Hz		43	-	dB

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79L12 Electrical characteristics (Unless otherwise specified $0 \le T_{\downarrow} \le +125 \degree C$, $V_i = -19V$, $I_0 = 40 \text{mA}$, $C_i = 0.33 \mu\text{F}$, $C_0 = 0.1 \mu\text{F}$)

Parameter name	Symbol	Tes	t Condition	Min	Тур	Max	Unit
	Vo	T _J =25℃		-11.5	-12	-12.5	v
Output Voltage	v _o	1mA≤I _O ≤40mA,	-14.5V≤V _I ≤-27V	-11.4	-12	-12.6	V
	c	T₁=25°C	-14.5V≤V _I ≤-27V	_	-	250	mV
Voltage Regulation	S_V	1 ₃ =25 C	-16V≤V _I ≤-27V	_		200	mv
Current Regulation	S_{I}	T _J =25°C, 1mA≤I	o≤100mA	_	_	100	mV
Quiescent Current	I_Q	T _J =25℃		_	_	6.5	mA
	Λ.I.	1mA≤I _O ≤40mA		_	_	0.1	A
Quiescent Current Change	$\triangle I_Q$	-16V≤V _I ≤-27V	-16V≤V _I ≤-27V		_	1.5	mA
Input - output differential pressure	V _I - V _O	T _J =25°C		_	1.7	_	V
Ripple Rejection Ratio	Srip	-15V≤V _I ≤-25V;	f=120Hz	_	42	_	dB

79L15 Electrical characteristics (Unless otherwise specified $0 \le T_{\downarrow} \le +125 \, ^{\circ}\text{C}$, $V_1 = -23V$, $I_0 = 40 \, \text{mA}$, $C_1 = 0.33 \, \mu\text{F}$, $C_0 = 0.1 \, \mu\text{F}$)

Parameter name	Symbol	Test	Condition	Min	Тур	Max	Unit
Output Voltage	V	T _J =25℃		-14.4	-15	-15.6	V
output vortage	V_{O}	1mA≤I _O ≤40mA,	-17.5V≤V _I ≤-30V	-14.25	-15	-15.75] '
	C	T -25°C	-17.5V≤V _I ≤-30V	_	_	300	V
Voltage Regulation	S_V	T _J =25℃	-20V≤V _I ≤-30V	_	_	250	mV
Current Regulation	S_{I}	$T_J=25^{\circ}C$, $1mA \leq I_O$	≤100mA	_	_	150	mV
Quiescent Current	I_Q	T _J =25℃		_	_	6.5	mA
Outros Consent Channel	A *	1mA≤I _O ≤40mA		_	_	0.1	m A
Quiescent Current Change	$\triangle I_Q$	-20V≤V _I ≤-30V	-20V≤V _I ≤-30V		_	1.5	mA
Input - output differential pressure	$ V_{I}$ - $V_{O} $	T _J =25 ℃	T _J =25°C		1.7	_	V
Ripple Rejection Ratio	Srip	-18.5V≤V _I ≤-28.5V	V; f=120Hz	_	39	_	dB

79L18 Electrical characteristics (Unless otherwise specified $0 \le T_{\downarrow} \le +125 ^{\circ}\text{C}$, $V_{i} = -27V$, $I_{0} = 40\text{mA}$, $C_{i} = 0.33 \mu\text{F}$, $C_{0} = 0.1 \mu\text{F}$)

Parameter name	Symbol	Test	Test Condition		Тур	Max	Unit
Output Voltage	V_{O}	T _J =25°C -17.3 -		-18	-18.7	V	
output vortage	v ₀	1mA≤I _O ≤40mA,	$-20.7V$ ≤ V_I ≤ $-33V$	-17.1	-18	-18.9	·
V 1	c	T _J =25℃	-20.7V≤V _I ≤-33V	_	_	325	mV
Voltage Regulation	S_V	1 ₃ -25 C	-21V≤V _I ≤-33V		_	275	
Current Regulation	S_{I}	T _J =25℃, 1mA≤I _C	0≤100mA	_	_	170	mV
Quiescent Current	I_Q	T _J =25℃		_	_	6.5	mA
Quiescent Current Change	Λ1	1mA≤I _O ≤40mA		_	_	0.1	A
Quiescent current change	$\triangle I_Q$	-21V≤V _I ≤-33V	-21V≤V _I ≤-33V		_	1.5	mA
Input - output differential pressure	$ V_I - V_O $	T _J =25°C			1.7	_	V
Ripple Rejection Ratio	Srip	-23V≤V _I ≤-33V;	f=120Hz	_	48		dB

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Unit: mm



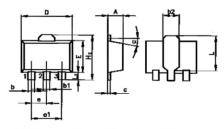
79L20 Electrical characteristics (Unless otherwise specified 0 ≤ T_J≤+125 °C, V₁=-29V, I₀=40mA, C₁=0. 33 µF, C₀=0. 1 µF)

Parameter name	Symbol	Т	est Condition	Min	Тур	Max	Unit
Outsut Valtage	W	T _J =25°C		-19.2	-20	-20.8	V
Output Voltage	V_0	1mA≤I ₀ ≤40ı	mA, -23.5V≤V _I ≤-35V	-19.0	-20	-21.0	v
Valtara Danulatian	S	T-25°C	-23.5V≤V _I ≤-35V	-		330	
Voltage Regulation	S_V	T _J =25°C	-24V≤V _I ≤-35V	_	_	285	mV
Current Regulation	S_{I}	T _J =25°C, 1m/	$A \leq I_O \leq 100 \text{mA}$	-		180	mV
Quiescent Current	I_Q	T _J =25°C		_	_	6.5	mA
0	٨٠	1mA≤I ₀ ≤40i	1mA≤I _O ≤40mA		_	0.1	
Quiescent Current Change	$\triangle I_Q$	-24V≤V _I ≤-35	-24V≤V _I ≤-35V			1.5	mA
Input - output differential pressure	$ V_I - V_O $	T _J =25°C	•	_	1.7	_	V
Ripple Rejection Ratio	Srip	-27V≤V _I ≤-3:	5V; f=120Hz	_	37	_	dB

79L24 Electrical characteristics (Unless otherwise specified $0 \leqslant T_{J} \leqslant +125 \, ^{\circ}\text{C}$, V_{i} =-33V, I_{0} =40mA, C_{i} =0. $33 \mu F$, C_{0} =0. $1 \mu F$)

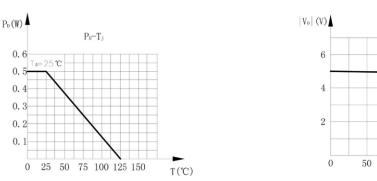
Parameter name	Symbol	Te	est Condition	Min	Тур	Max	Unit
Output Voltage	V_{O}	T _J =25 ℃		-23.0	-24	-25.0	V
output vortage	v ₀	$1\text{mA} \leq I_{\text{O}} \leq 40\text{m}$	nA, -27V≤V _I ≤-38V	-22.8	-24	-25.2	v
Voltage Regulation	c	T₁=25°C	-27V≤V _I ≤-38V	_		350	mV
vortage Regulation	S_V	1 j=25 C	-28V≤V _I ≤-38V	_	_	300	m v
Current Regulation	S_{I}	T _J =25℃, 1mA	$\leq I_0 \leq 100 \text{mA}$	_	_	200	mV
Quiescent Current	I_Q	T _J =25 ℃		_	_	6.5	mA
Quiescent Current Change	^ I	1mA≤I _O ≤40n	nA	_	_	0.1	mA
Quiescent current change	$\triangle I_Q$	-28V≤V _I ≤-38	-28V≤V _I ≤-38V		_	1.5	mA
Input - output differential pressure	$ V_{I}-V_{O} $	T _J =25 ℃	T _J =25℃		1.7	_	V
Ripple Rejection Ratio	Srip	-29V≤V _I ≤-35	V; f=120Hz	_	47	_	dB

SOT-89 Dimensions



1GND 2 IN 3 OUT

Size	SOT-89			Size	SOT-89		
Symbol	min	typ	max	Symbol	min typ m		max
A		1.5		e		1.5	
b			0.65	e1		3	
b1			0.65	H_E			4.25
b2		1.6		L	2.6		2.95
С	0.25			L_{E}	0.8		1.2
D		4.5		α			10°
E			2.6				



Dissipation of power and temperature curves

The curve of the output voltage and junction temperature

100

|V₁|=10V I₀=5. OmA

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