

● 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

Parameter	Symbol	Ratings	Unit
Input voltage ( $T_A=25^\circ\text{C}$ )	79L05~79L15	-35	V
	79L18~79L24	-40	
Output current	$I_O$	0.15	A
Total power dissipation ( $T_A=25^\circ\text{C}$ )	$P_D$	0.5	W
Work (tube shell) temperature	$T_{OP}$	-40~85	$^\circ\text{C}$
Storage temperature	$T_{sg}$	-55~150	$^\circ\text{C}$

Note: Devices installed in good thermal environment

Three-terminal fixed output voltage regulator

0.5W、0.15A、-5V~-24V



79L05 Electrical characteristics (Unless otherwise specified  $0 \leq T_J \leq +125^\circ\text{C}$ ,  $V_i = -10\text{V}$ ,  $I_o = 40\text{mA}$ ,  $C_i = 0.33\mu\text{F}$ ,  $C_o = 0.1\mu\text{F}$ )

Parameter name	Symbol	Test Condition	Min	Typ	Max	Unit	
Output Voltage	$V_O$	$T_J = 25^\circ\text{C}$	-4.8	-5	-5.2	V	
		$1\text{mA} \leq I_O \leq 40\text{mA}$ , $-7\text{V} \leq V_i \leq -20\text{V}$	-4.75	-5	-5.25		
Voltage Regulation	$S_V$	$T_J = 25^\circ\text{C}$	$-7\text{V} \leq V_i \leq -20\text{V}$	—	—	150	mV
			$-8\text{V} \leq V_i \leq -20\text{V}$	—	—	100	
Current Regulation	$S_I$	$T_J = 25^\circ\text{C}$ , $1\text{mA} \leq I_O \leq 100\text{mA}$	—	—	60	mV	
Quiescent Current	$I_Q$	$T_J = 25^\circ\text{C}$	—	—	6	mA	
Quiescent Current Change	$\Delta I_Q$	$1\text{mA} \leq I_O \leq 40\text{mA}$	—	—	0.1	mA	
		$-8\text{V} \leq V_i \leq -20\text{V}$	—	—	1.5		
Input - output differential pressure	$ V_i - V_O $	$T_J = 25^\circ\text{C}$	—	1.7	—	V	
Ripple Rejection Ratio	$S_{rip}$	$-8\text{V} \leq V_i \leq -18\text{V}$ ; $f = 120\text{Hz}$	—	49	—	dB	

79L06 Electrical characteristics (Unless otherwise specified  $0 \leq T_J \leq +125^\circ\text{C}$ ,  $V_i = -11\text{V}$ ,  $I_o = 40\text{mA}$ ,  $C_i = 0.33\mu\text{F}$ ,  $C_o = 0.1\mu\text{F}$ )

Parameter name	Symbol	Test Condition	Min	Typ	Max	Unit	
Output Voltage	$V_O$	$T_J = 25^\circ\text{C}$	-5.76	-6	-6.24	V	
		$1\text{mA} \leq I_O \leq 40\text{mA}$ , $-8.1\text{V} \leq V_i \leq -21\text{V}$	-5.7	-6	-6.3		
Voltage Regulation	$S_V$	$T_J = 25^\circ\text{C}$	$-8.1\text{V} \leq V_i \leq -21\text{V}$	—	—	150	mV
			$-9\text{V} \leq V_i \leq -21\text{V}$	—	—	110	
Current Regulation	$S_I$	$T_J = 25^\circ\text{C}$ , $1\text{mA} \leq I_O \leq 100\text{mA}$	—	—	70	mV	
Quiescent Current	$I_Q$	$T_J = 25^\circ\text{C}$	—	—	6	mA	
Quiescent Current Change	$\Delta I_Q$	$1\text{mA} \leq I_O \leq 40\text{mA}$	—	—	0.1	mA	
		$-9\text{V} \leq V_i \leq -20\text{V}$	—	—	1.5		
Input - output differential pressure	$ V_i - V_O $	$T_J = 25^\circ\text{C}$	—	1.7	—	V	
Ripple Rejection Ratio	$S_{rip}$	$-9\text{V} \leq V_i \leq -19\text{V}$ ; $f = 120\text{Hz}$	—	47	—	dB	

**79L08 Electrical characteristics** (Unless otherwise specified  $0 \leq T_J \leq +125^\circ\text{C}$ ,  $V_I = -14\text{V}$ ,  $I_O = 40\text{mA}$ ,  $C_I = 0.33\mu\text{F}$ ,  $C_O = 0.1\mu\text{F}$ )

Parameter name	Symbol	Test Condition	Min	Typ	Max	Unit	
Output Voltage	$V_O$	$T_J = 25^\circ\text{C}$	-7.7	-8	-8.3	V	
		$1\text{mA} \leq I_O \leq 40\text{mA}$ , $-10.5\text{V} \leq V_I \leq -23\text{V}$	-7.6	-8	-8.4		
Voltage Regulation	$S_V$	$T_J = 25^\circ\text{C}$	$-10.5\text{V} \leq V_I \leq -23\text{V}$	—	—	175	mV
			$-11\text{V} \leq V_I \leq -23\text{V}$	—	—	125	
Current Regulation	$S_I$	$T_J = 25^\circ\text{C}$ , $1\text{mA} \leq I_O \leq 100\text{mA}$	—	—	80	mV	
Quiescent Current	$I_Q$	$T_J = 25^\circ\text{C}$	—	—	6.5	mA	
Quiescent Current Change	$\Delta I_Q$	$1\text{mA} \leq I_O \leq 40\text{mA}$ ,	—	—	0.1	mA	
		$-11\text{V} \leq V_I \leq -23\text{V}$	—	—	1.5		
Input - output differential pressure	$ V_I - V_O $	$T_J = 25^\circ\text{C}$	—	1.7	—	V	
Ripple Rejection Ratio	Srip	$-12\text{V} \leq V_I \leq -23\text{V}$ ; $f = 120\text{Hz}$	—	45	—	dB	

**79L09 Electrical characteristics** (Unless otherwise specified  $0 \leq T_J \leq +125^\circ\text{C}$ ,  $V_I = -15\text{V}$ ,  $I_O = 40\text{mA}$ ,  $C_I = 0.33\mu\text{F}$ ,  $C_O = 0.1\mu\text{F}$ )

Parameter name	Symbol	Test Condition	Min	Typ	Max	Unit	
Output Voltage	$V_O$	$T_J = 25^\circ\text{C}$	-8.64	-9	-9.36	V	
		$1\text{mA} \leq I_O \leq 40\text{mA}$ , $-11.4\text{V} \leq V_I \leq -24\text{V}$	-8.55	-9	-9.45		
Voltage Regulation	$S_V$	$T_J = 25^\circ\text{C}$	$-11.4\text{V} \leq V_I \leq -24\text{V}$	—	—	200	mV
			$-12\text{V} \leq V_I \leq -24\text{V}$	—	—	160	
Current Regulation	$S_I$	$T_J = 25^\circ\text{C}$ , $1\text{mA} \leq I_O \leq 100\text{mA}$	—	—	90	mV	
Quiescent Current	$I_Q$	$T_J = 25^\circ\text{C}$	—	—	6.5	mA	
Quiescent Current Change	$\Delta I_Q$	$1\text{mA} \leq I_O \leq 40\text{mA}$	—	—	0.1	mA	
		$-12\text{V} \leq V_I \leq -24\text{V}$	—	—	1.5		
Input - output differential pressure	$ V_I - V_O $	$T_J = 25^\circ\text{C}$	—	1.7	—	V	
Ripple Rejection Ratio	Srip	$-12\text{V} \leq V_I \leq -24\text{V}$ ; $f = 120\text{Hz}$	—	44	—	dB	

**79L10 Electrical characteristics** (Unless otherwise specified  $0 \leq T_J \leq +125^\circ\text{C}$ ,  $V_I = -16\text{V}$ ,  $I_O = 40\text{mA}$ ,  $C_I = 0.33\mu\text{F}$ ,  $C_O = 0.1\mu\text{F}$ )

Parameter name	Symbol	Test Condition	Min	Typ	Max	Unit	
Output Voltage	$V_O$	$T_J = 25^\circ\text{C}$	-9.6	-10	-10.4	V	
		$1\text{mA} \leq I_O \leq 40\text{mA}$ , $-12.5\text{V} \leq V_I \leq -25\text{V}$	-9.5	-10	-10.5		
Voltage Regulation	$S_V$	$T_J = 25^\circ\text{C}$	$-12.5\text{V} \leq V_I \leq -25\text{V}$	—	—	230	mV
			$-13\text{V} \leq V_I \leq -25\text{V}$	—	—	170	
Current Regulation	$S_I$	$T_J = 25^\circ\text{C}$ , $1\text{mA} \leq I_O \leq 100\text{mA}$	—	—	90	mV	
Quiescent Current	$I_Q$	$T_J = 25^\circ\text{C}$	—	—	6.5	mA	
Quiescent Current Change	$\Delta I_Q$	$1\text{mA} \leq I_O \leq 40\text{mA}$	—	—	0.1	mA	
		$-13\text{V} \leq V_I \leq -25\text{V}$	—	—	1.5		
Input - output differential pressure	$ V_I - V_O $	$T_J = 25^\circ\text{C}$	—	1.7	—	V	
Ripple Rejection Ratio	Srip	$-13\text{V} \leq V_I \leq -24\text{V}$ ; $f = 120\text{Hz}$	—	43	—	dB	

**79L12 Electrical characteristics** (Unless otherwise specified  $0 \leq T_J \leq +125^\circ\text{C}$ ,  $V_I = -19\text{V}$ ,  $I_O = 40\text{mA}$ ,  $C_I = 0.33\mu\text{F}$ ,  $C_O = 0.1\mu\text{F}$ )

Parameter name	Symbol	Test Condition	Min	Typ	Max	Unit	
Output Voltage	$V_O$	$T_J = 25^\circ\text{C}$	-11.5	-12	-12.5	V	
		$1\text{mA} \leq I_O \leq 40\text{mA}$ , $-14.5\text{V} \leq V_I \leq -27\text{V}$	-11.4	-12	-12.6		
Voltage Regulation	$S_V$	$T_J = 25^\circ\text{C}$	$-14.5\text{V} \leq V_I \leq -27\text{V}$	—	—	250	mV
			$-16\text{V} \leq V_I \leq -27\text{V}$	—	—	200	
Current Regulation	$S_I$	$T_J = 25^\circ\text{C}$ , $1\text{mA} \leq I_O \leq 100\text{mA}$	—	—	100	mV	
Quiescent Current	$I_Q$	$T_J = 25^\circ\text{C}$	—	—	6.5	mA	
Quiescent Current Change	$\Delta I_Q$	$1\text{mA} \leq I_O \leq 40\text{mA}$	—	—	0.1	mA	
		$-16\text{V} \leq V_I \leq -27\text{V}$	—	—	1.5		
Input - output differential pressure	$ V_I - V_O $	$T_J = 25^\circ\text{C}$	—	1.7	—	V	
Ripple Rejection Ratio	Srip	$-15\text{V} \leq V_I \leq -25\text{V}$ ; $f = 120\text{Hz}$	—	42	—	dB	

**79L15 Electrical characteristics** (Unless otherwise specified  $0 \leq T_J \leq +125^\circ\text{C}$ ,  $V_I = -23\text{V}$ ,  $I_O = 40\text{mA}$ ,  $C_I = 0.33\mu\text{F}$ ,  $C_O = 0.1\mu\text{F}$ )

Parameter name	Symbol	Test Condition	Min	Typ	Max	Unit	
Output Voltage	$V_O$	$T_J = 25^\circ\text{C}$	-14.4	-15	-15.6	V	
		$1\text{mA} \leq I_O \leq 40\text{mA}$ , $-17.5\text{V} \leq V_I \leq -30\text{V}$	-14.25	-15	-15.75		
Voltage Regulation	$S_V$	$T_J = 25^\circ\text{C}$	$-17.5\text{V} \leq V_I \leq -30\text{V}$	—	—	300	mV
			$-20\text{V} \leq V_I \leq -30\text{V}$	—	—	250	
Current Regulation	$S_I$	$T_J = 25^\circ\text{C}$ , $1\text{mA} \leq I_O \leq 100\text{mA}$	—	—	150	mV	
Quiescent Current	$I_Q$	$T_J = 25^\circ\text{C}$	—	—	6.5	mA	
Quiescent Current Change	$\Delta I_Q$	$1\text{mA} \leq I_O \leq 40\text{mA}$	—	—	0.1	mA	
		$-20\text{V} \leq V_I \leq -30\text{V}$	—	—	1.5		
Input - output differential pressure	$ V_I - V_O $	$T_J = 25^\circ\text{C}$	—	1.7	—	V	
Ripple Rejection Ratio	Srip	$-18.5\text{V} \leq V_I \leq -28.5\text{V}$ ; $f = 120\text{Hz}$	—	39	—	dB	

**79L18 Electrical characteristics** (Unless otherwise specified  $0 \leq T_J \leq +125^\circ\text{C}$ ,  $V_I = -27\text{V}$ ,  $I_O = 40\text{mA}$ ,  $C_I = 0.33\mu\text{F}$ ,  $C_O = 0.1\mu\text{F}$ )

Parameter name	Symbol	Test Condition	Min	Typ	Max	Unit	
Output Voltage	$V_O$	$T_J = 25^\circ\text{C}$	-17.3	-18	-18.7	V	
		$1\text{mA} \leq I_O \leq 40\text{mA}$ , $-20.7\text{V} \leq V_I \leq -33\text{V}$	-17.1	-18	-18.9		
Voltage Regulation	$S_V$	$T_J = 25^\circ\text{C}$	$-20.7\text{V} \leq V_I \leq -33\text{V}$	—	—	325	mV
			$-21\text{V} \leq V_I \leq -33\text{V}$	—	—	275	
Current Regulation	$S_I$	$T_J = 25^\circ\text{C}$ , $1\text{mA} \leq I_O \leq 100\text{mA}$	—	—	170	mV	
Quiescent Current	$I_Q$	$T_J = 25^\circ\text{C}$	—	—	6.5	mA	
Quiescent Current Change	$\Delta I_Q$	$1\text{mA} \leq I_O \leq 40\text{mA}$	—	—	0.1	mA	
		$-21\text{V} \leq V_I \leq -33\text{V}$	—	—	1.5		
Input - output differential pressure	$ V_I - V_O $	$T_J = 25^\circ\text{C}$	—	1.7	—	V	
Ripple Rejection Ratio	Srip	$-23\text{V} \leq V_I \leq -33\text{V}$ ; $f = 120\text{Hz}$	—	48	—	dB	

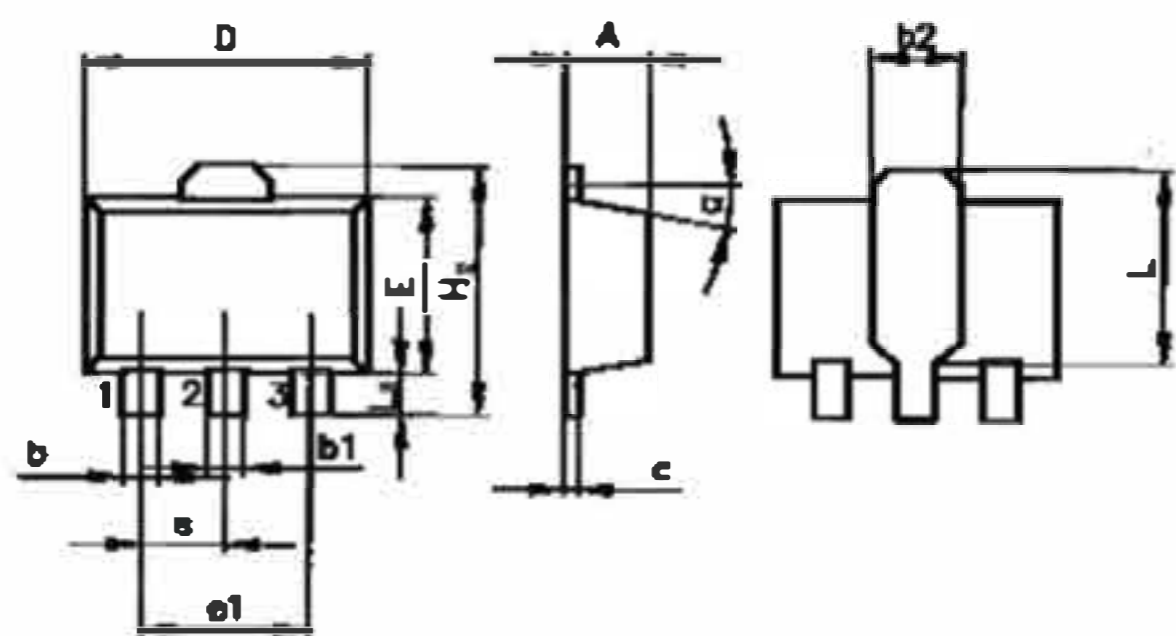
### 79L20 Electrical characteristics (Unless otherwise specified $0 \leq T_J \leq +125^\circ\text{C}$ , $V_i = -29\text{V}$ , $I_o = 40\text{mA}$ , $C_i = 0.33\mu\text{F}$ , $C_o = 0.1\mu\text{F}$ )

Parameter name	Symbol	Test Condition	Min	Typ	Max	Unit	
Output Voltage	$V_o$	$T_J = 25^\circ\text{C}$	-19.2	-20	-20.8	V	
		$1\text{mA} \leq I_o \leq 40\text{mA}$ , $-23.5\text{V} \leq V_i \leq -35\text{V}$	-19.0	-20	-21.0		
Voltage Regulation	$S_v$	$T_J = 25^\circ\text{C}$	$-23.5\text{V} \leq V_i \leq -35\text{V}$	—	—	330	mV
			$-24\text{V} \leq V_i \leq -35\text{V}$	—	—	285	
Current Regulation	$S_i$	$T_J = 25^\circ\text{C}$ , $1\text{mA} \leq I_o \leq 100\text{mA}$	—	—	180	mV	
Quiescent Current	$I_Q$	$T_J = 25^\circ\text{C}$	—	—	6.5	mA	
Quiescent Current Change	$\Delta I_Q$	$1\text{mA} \leq I_o \leq 40\text{mA}$	—	—	0.1	mA	
		$-24\text{V} \leq V_i \leq -35\text{V}$	—	—	1.5		
Input - output differential pressure	$ V_i - V_o $	$T_J = 25^\circ\text{C}$	—	1.7	—	V	
Ripple Rejection Ratio	Srip	$-27\text{V} \leq V_i \leq -35\text{V}$ ; $f = 120\text{Hz}$	—	37	—	dB	

### 79L24 Electrical characteristics (Unless otherwise specified $0 \leq T_J \leq +125^\circ\text{C}$ , $V_i = -33\text{V}$ , $I_o = 40\text{mA}$ , $C_i = 0.33\mu\text{F}$ , $C_o = 0.1\mu\text{F}$ )

Parameter name	Symbol	Test Condition	Min	Typ	Max	Unit	
Output Voltage	$V_o$	$T_J = 25^\circ\text{C}$	-23.0	-24	-25.0	V	
		$1\text{mA} \leq I_o \leq 40\text{mA}$ , $-27\text{V} \leq V_i \leq -38\text{V}$	-22.8	-24	-25.2		
Voltage Regulation	$S_v$	$T_J = 25^\circ\text{C}$	$-27\text{V} \leq V_i \leq -38\text{V}$	—	—	350	mV
			$-28\text{V} \leq V_i \leq -38\text{V}$	—	—	300	
Current Regulation	$S_i$	$T_J = 25^\circ\text{C}$ , $1\text{mA} \leq I_o \leq 100\text{mA}$	—	—	200	mV	
Quiescent Current	$I_Q$	$T_J = 25^\circ\text{C}$	—	—	6.5	mA	
Quiescent Current Change	$\Delta I_Q$	$1\text{mA} \leq I_o \leq 40\text{mA}$	—	—	0.1	mA	
		$-28\text{V} \leq V_i \leq -38\text{V}$	—	—	1.5		
Input - output differential pressure	$ V_i - V_o $	$T_J = 25^\circ\text{C}$	—	1.7	—	V	
Ripple Rejection Ratio	Srip	$-29\text{V} \leq V_i \leq -35\text{V}$ ; $f = 120\text{Hz}$	—	47	—	dB	

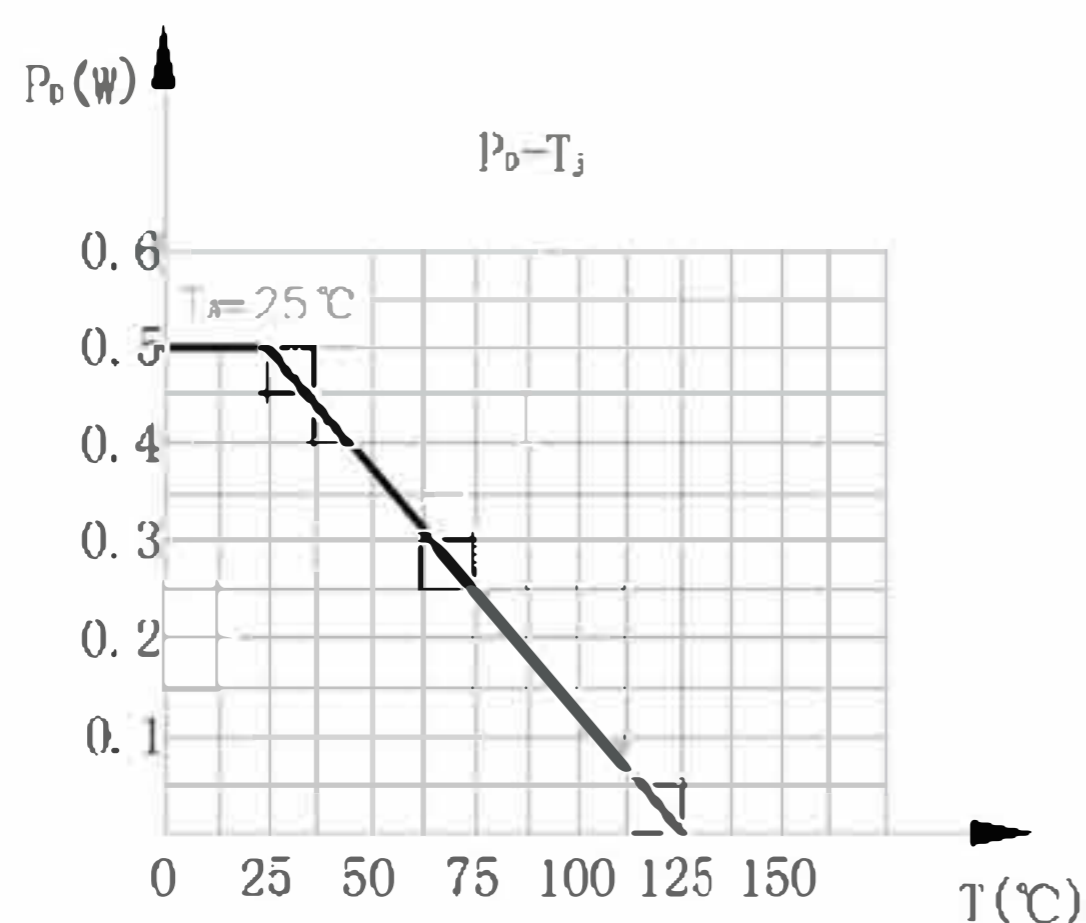
### SOT-89P Dimensions



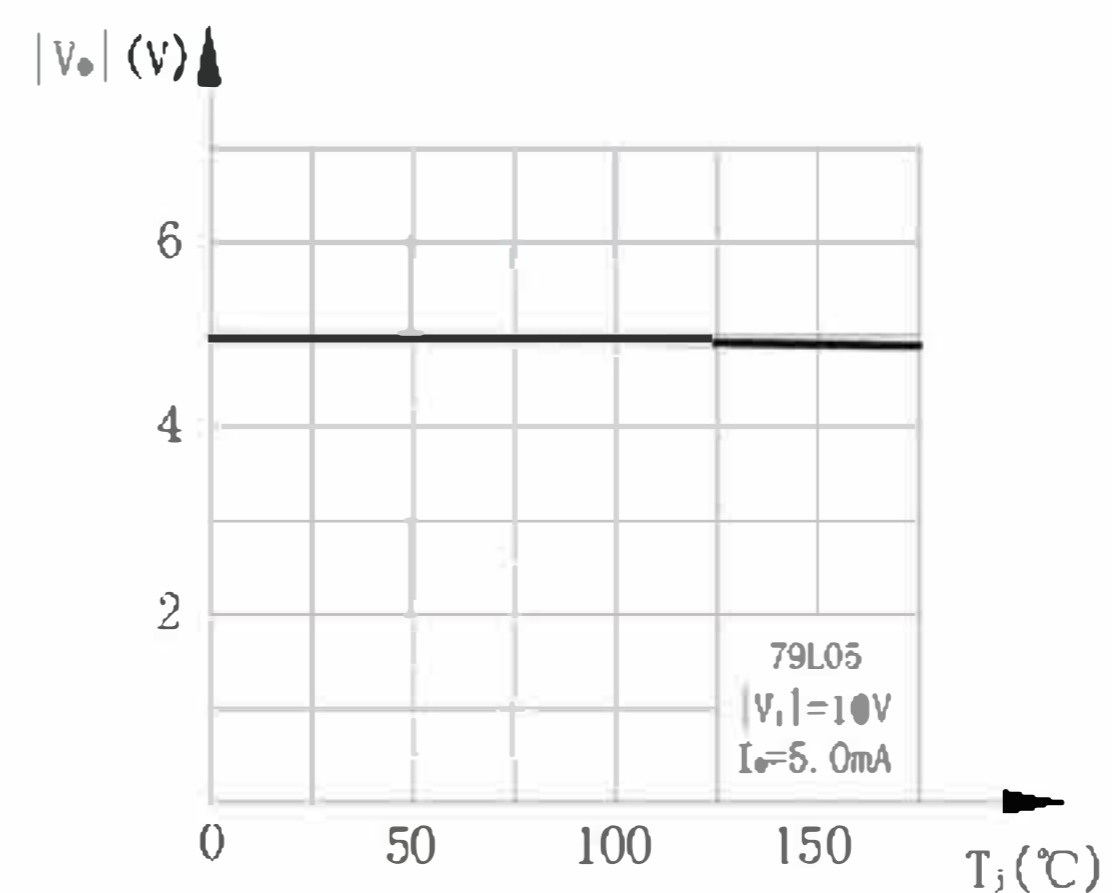
1 GND 2 IN 3 OUT

Unit: mm

Size	SOT-89P			Size	SOT-89P			
	Symbol	min	typ		max	Symbol	min	typ
A			1.5	e			1.5	
b				e1			3	
b1			0.65	H <sub>F</sub>				4.25
b2			1.6	L	2.6			2.95
c	0.25			L <sub>F</sub>	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

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Linear Voltage Regulators](#) category:*

*Click to view products by [Shikues](#) manufacturer:*

Other Similar products are found below :

[LV5684PVD-XH](#) [MCDTSA6-2R](#) [L7815ACV-DG](#) [LV56801P-E](#) [UA7805CKC](#) [714954EB](#) [ZMR500QFTA](#) [BA033LBSG2-TR](#)

[NCV78M05ABDTRKG](#) [LV5680P-E](#) [L79M05T-E](#) [L78LR05D-MA-E](#) [NCV317MBTG](#) [NTE7227](#) [MP2018GZD-33-P](#) [MP2018GZD-5-P](#)

[LV5680NPVC-XH](#) [ZTS6538SE](#) [UA78L09CLP](#) [UA78L09CLPR](#) [CAT6221-PPTD-GT3](#) [MC78M09CDTRK](#) [NCV51190MNTAG](#)

[BL1118CS8TR1833](#) [BL8563CKETR18](#) [BL8077CKETR33](#) [BL9153-33CC3TR](#) [BL9161G-15BADRN](#) [BL9161G-28BADRN](#)

[BRCO7530MMC](#) [CJ7815B-TFN-ARG](#) [LM317C](#) [GM7333K](#) [GM7350K](#) [XC6206P332MR](#) [HT7533](#) [LM7912S/TR](#) [LT1764S/TR](#) [LM7805T](#)

[LM338T](#) [LM1117IMP-3.3/TR](#) [HT1117AM-3.3](#) [HT7550S](#) [AMS1117-3.3](#) [HT7150S](#) [78L12](#) [HT7550](#) [HT7533-1](#) [HXY6206I-2.5](#) [HT7133](#)