

**● Features:**

Output current in excess of 150 mA    No external components required    Internal short circuit current limiting  
Internal thermal overload protection    Available in either 5% selections

**78L09**

Three-terminal fixed output voltage regulator  
0.5W、0.15A、9V

**● Electrical Characteristics (Ta=25°C)**

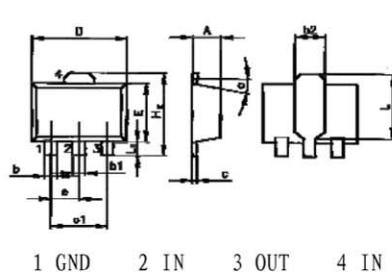
Parameter	Symbol	Ratings	Unit
Input voltage (Ta=25°C)	V <sub>I</sub>	35	V
Output current	I <sub>O</sub>	0.15	A
Power dissipation (Ta=25°C)	P <sub>D</sub>	0.5	W
Ambient temperature	T <sub>OP</sub>	-40~85	°C
Storage Temperature	T <sub>STG</sub>	-55~150	°C



Device is installed in a good heat dissipation

**● Electrical characteristics (Unless otherwise specified) 0 ≤ T<sub>J</sub> ≤ +125°C, V<sub>I</sub>=15V, I<sub>O</sub>=40mA, C<sub>i</sub>=0.33μF, C<sub>o</sub>=0.1μF)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V <sub>O</sub>	T <sub>J</sub> =25°C	8.55	9.0	9.45	V
		1mA ≤ I <sub>O</sub> ≤ 40mA, 11.4V ≤ V <sub>I</sub> ≤ 24V	8.37	9.0	9.63	
Voltage Regulation	S <sub>V</sub>	T <sub>J</sub> =25°C	—	—	200	mV
			—	—	160	
Current Regulation	S <sub>I</sub>	T <sub>J</sub> =25°C, 1mA ≤ I <sub>O</sub> ≤ 100mA	—	—	90	mV
Quiescent Current	I <sub>Q</sub>	T <sub>J</sub> =25°C	—	—	6.5	mA
Quiescent Current Change	△I <sub>Q</sub>	1mA ≤ I <sub>O</sub> ≤ 40mA	—	—	0.1	mA
		12V ≤ V <sub>I</sub> ≤ 24V	—	—	1.5	
Input - output differential pressure	V <sub>I</sub> -V <sub>O</sub>	T <sub>J</sub> =25°C	—	1.7	—	V
Ripple Rejection Ratio	Srip	T <sub>J</sub> =25°C, 12V ≤ V <sub>I</sub> ≤ 24V; f=120Hz;	—	44	—	dB

**SOT-89 Dimensions**


Symbol	SOT-89			Symbol	SOT-89		
	min	typ	max		min	typ	max
A		1.5		e		1.5	
b			0.65	e1		3	
b1			0.65	H <sub>E</sub>			4.25
b2		1.6		L	2.6		2.95
c	0.25			L <sub>E</sub>	0.8		1.2
D		4.5		α			10°
E			2.6				

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