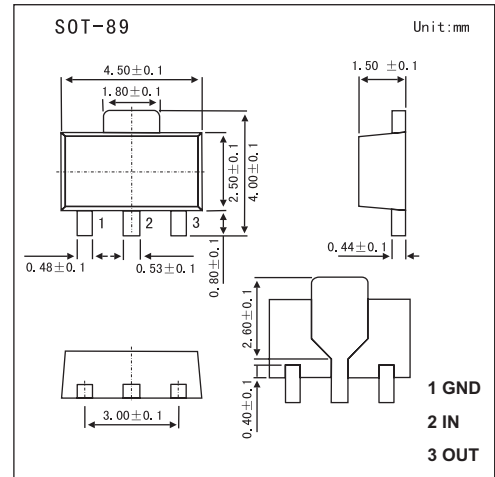


## Three-terminal Voltage Regulator

## LM79L09

## ■ Features

- Maximum output current  $I_{om}$  : 0.1A.
- Output voltage  $V_o$  : -9V.
- Continuous total dissipation  $P_D$  : 0.5W

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Input Voltage	$V_i$	-30	V
Operating junction temperature range	$T_{OPR}$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics ( $V_i=16\text{V}, I_o=40\text{mA}, 0^\circ\text{C}<T_j<125^\circ\text{C}, C_1=0.33\mu\text{F}, C_o=0.1\mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	$V_o$	$T_j=25^\circ\text{C}$	-8.64	-9.0	-9.36	V
		$-12\text{V}\leq V_i\leq -24\text{V}, I_o=1\text{mA}-40\text{mA}$	-8.55	-9.0	-9.45	V
		$I_o=1\text{mA}-70\text{mA}$	-8.55	-9.0	-9.45	V
Load regulation	$\Delta V_o$	$T_j=25^\circ\text{C}, I_o=1\text{mA}-100\text{mA}$		19	90	mV
		$T_j=25^\circ\text{C}, I_o=1\text{mA}-40\text{mA}$		11	40	mV
Line regulation	$\Delta V_o$	$-12\text{V}\leq V_i\leq -24\text{V}, T_j=25^\circ\text{C}$		45	175	mV
		$-13\text{V}\leq V_i\leq -24\text{V}, T_j=25^\circ\text{C}$		40	125	mV
Quiescent current	$I_q$	$25^\circ\text{C}$		4.1	6.0	mA
Quiescent current change	$\Delta I_q$	$0^\circ\text{C}<T_j<125^\circ\text{C}, -13\leq V_i\leq -24\text{V}$			1.5	mA
	$\Delta I_q$	$0^\circ\text{C}<T_j<125^\circ\text{C}, 1\text{mA}\leq I_o\leq 40\text{mA}$			0.1	mA
Output noise voltage	$V_N$	$10\text{Hz}\leq f\leq 100\text{KHz}, T_j=25^\circ\text{C}$		58		$\mu\text{V}$
Ripple rejection	RR	$-15\text{V}\leq V_i\leq -24\text{V}, f=120\text{Hz}$		45		dB
Dropout voltage	$V_d$	$T_j=25^\circ\text{C}$		1.7		V

## ■ Typical Application

