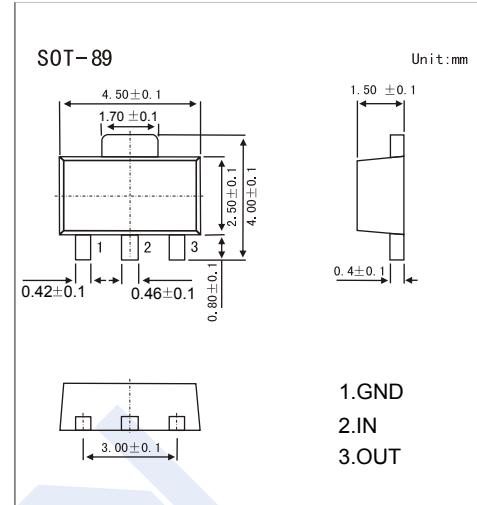


Three-Terminal Negative Voltage Regulator

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	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

■ Electrical Characteristics ($V_I=16\text{V}, I_O=40\text{mA}, 0^\circ\text{C} < T_j < 125^\circ\text{C}, C_1=0.33\mu\text{F}, C_0=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Testconditions	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	ΔV_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	ΔV_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°C		4.1	6.0	mA
Quiescent current change	ΔI_Q	$0^\circ\text{C} < T_j < 125^\circ\text{C}, -13 \leq V_I \leq -24\text{V}$		1.5		mA
	ΔI_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			uV
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

