

SM79L09

3-Terminal Negative Voltage Regulator

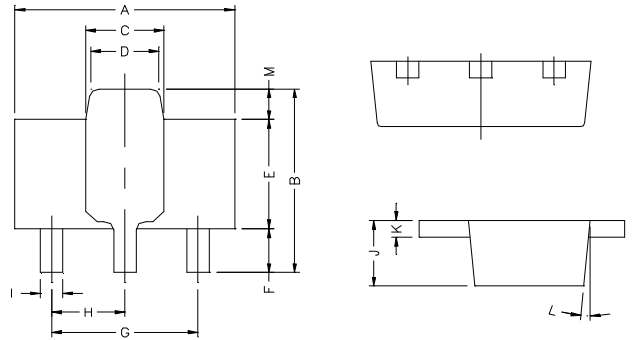
Description

The SM79L09 is monolithic fixed voltage regulator integrated circuit. They are suitable for applications that required supply current up to 100mA.

Features

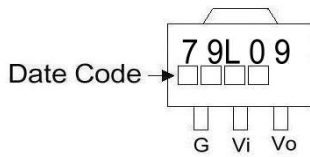
- * Short Circuit Current Limiting
- * Output Current Up To 100mA
- * Thermal Overload Shutdown Protection

SOT-89



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.4	4.6	G	3.00	REF.
B	4.05	4.25	H	1.50	REF.
C	1.50	1.70	I	0.40	0.52
D	1.30	1.50	J	1.40	1.60
E	2.40	2.60	K	0.35	0.41
F	0.89	1.20	L	5° TYP.	
			M	0.70 REF.	

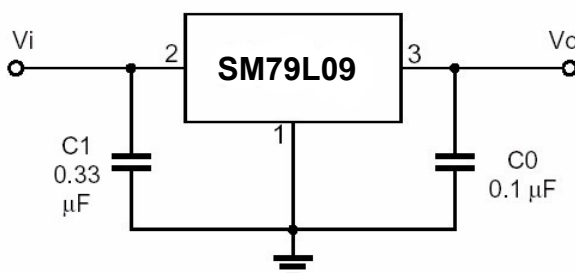
Marking :



Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Input Voltage	V_{IN}	-30	V
Output Current	I_o	100	mA
Operating Junction Temperature Range	T_j	0~+125	°C
Storage Temperature Range	T_{stg}	-55~+150	°C
Total Power Dissipation	P_D	350	mW

Application Circuit



Electrical Characteristics at Ta=25°C

Rank A (3%) $V_I = -15V, I_O = 40mA, T_J = 25^\circ C, C_{IN} = 0.33\mu F, C_{OUT} = 0.1\mu F$ unless otherwise specified

Symbol	Min.	Typ.	Max.	Unit	Test Condition
V_O	-8.73	-9	-9.27	V	$V_{IN} = -15V, I_O = 40mA$
$\Delta V_O - V_{IN}$ (Line Regulation)	-	27	200	mV	$V_{IN} = -12.5V \sim -24V, I_O = 40mA$
$\Delta V_O - I_O$ (Load Regulation)	-	12	90	mV	$V_{IN} = -15V, I_O = 1 \sim 100mA$
I_Q Quiescent Current	-	3.5	6	mA	$V_{IN} = -15V, I_O = 40mA$
V_{NO} Output Noise Voltage	-	210	-	μV	$V_{IN} = -15V, BW = 10Hz \sim 100KHz, I_O = 40mA$
RR Ripple Rejection	37	64	-	dB	$V_{IN} = -12V \sim -22V, I_O = 40mA, E_{IN} = 1V_{P-P}, f = 150Hz$

Rank B (5%) $V_I = -15V, I_O = 40mA, T_J = 25^\circ C, C_{IN} = 0.33\mu F, C_{OUT} = 0.1\mu F$ unless otherwise specified

Symbol	Min.	Typ.	Max.	Unit	Test Condition
V_O	-8.55	-9	-9.45	V	$V_{IN} = -15V, I_O = 40mA$
$\Delta V_O - V_{IN}$ (Line Regulation)	-	27	200	mV	$V_{IN} = -12.5V \sim -24V, I_O = 40mA$
$\Delta V_O - I_O$ (Load Regulation)	-	12	90	mV	$V_{IN} = -15V, I_O = 1 \sim 100mA$
I_Q Quiescent Current	-	3.5	6	mA	$V_{IN} = -15V, I_O = 40mA$
V_{NO} Output Noise Voltage	-	210	-	μV	$V_{IN} = -15V, BW = 10Hz \sim 100KHz, I_O = 40mA$
RR Ripple Rejection	37	64	-	dB	$V_{IN} = -12V \sim -22V, I_O = 40mA, E_{IN} = 1V_{P-P}, f = 150Hz$