



Micro Commercial Components

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MC78L09BP

Features

- Internal Short Circuit Current Limiting
- Internal Thermal Overload Protection
- No External Components Required
- Case Material: Molded Plastic. UL Flammability Classification Rating 94-0 and MSL Rating 1
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

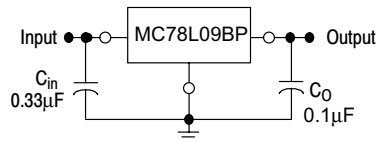
Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage	V_1	30	V
Operating Junction Temperature	T_{OPR}	0 ---+120	°C
Storage Temperature Range	T_{STG}	-55---+150	°C

Electrical Characteristics ($V_1=15V, I_o=40mA, 0^\circ C < T_j < 125^\circ C, C_1=0.33\mu F, C_o=0.1\mu F, \text{ unless otherwise specified}$)

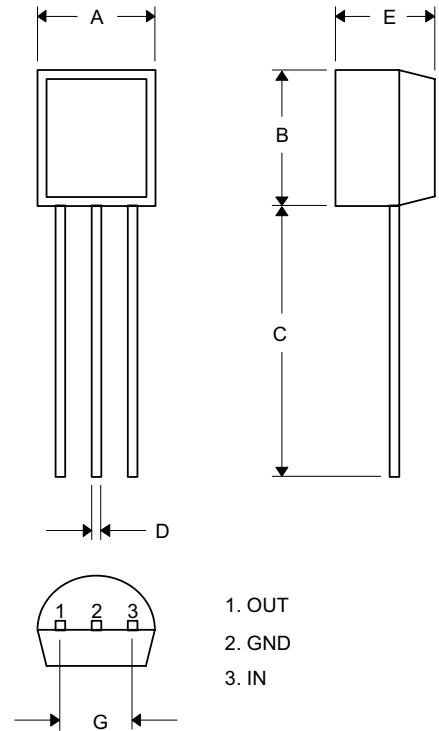
Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V_o	8.64V	9.0V	9.36V	$T_j=25^\circ C$
		8.55V		9.45V	$12.0V \leq V_1 \leq 24V, I_o=1mA-40mA$
		8.55V		9.45V	$11.5V \leq V_1 \leq V_{MAX}, I_o=1mA-70mA \text{ (Note)}$
Load Regulation	ΔV_o		20mV	90mV	$I_o=1mA-100mA, T_j=25^\circ C$
			11mV	40mV	$I_o=1mA-40mA, T_j=25^\circ C$
Line regulation	ΔV_o		45mV 40mV	175mV 125mV	$12.0V \leq V_1 \leq 24V, T_j=25^\circ C$ $13V \leq V_1 \leq 24V, T_j=25^\circ C$
Quiescent Current	I_q		4.1mA	6.0mA	$13V \leq V_1 \leq 24V$
Quiescent Current Change	ΔI_q			1.5mA	
Output Noise Voltage	V_N		49uV		$10Hz \leq f \leq 100KHz$
Ripple Rejection	RR		45dB		$15V \leq V_1 \leq 23V, f=120Hz, T_j=25^\circ C$
Dropout Voltage	V_d		1.7V		$T_j=25^\circ C$

*Note: Bypass Capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators
 Typical Application:



Three-Terminal Low Current Positive Voltage Regulator

TO-92



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	



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Ordering Information

Device	Packing
(Part Number)-AP	Ammo Packing;2Kpcs/AmmoBox
(Part Number)-BP	Bulk;1Kpcs/Bag

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