

## Features

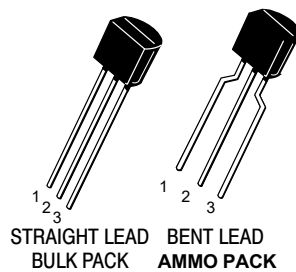
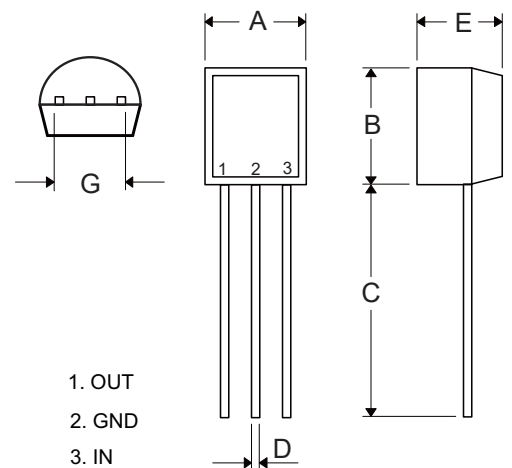
- Internal Thermal Overload Protection
- Internal Short Circuit Current Limiting
- No External Components Required
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

## Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage	$V_1$	30	V
Maximum Output Current	$I_o$	0.1	A
Operating Junction Temperature Range	$T_{opr}$	-20~120	°C
Storage Temperature Range	$T_{STG}$	-55~150	°C

# Three-Terminal Low Current Positive Voltage Regulators

## TO-92



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.169	0.185	4.30	4.70	
B	0.169	0.185	4.30	4.70	
C	0.500	-----	12.70	-----	
D	0.015	0.022	0.38	0.55	
E	0.130	0.146	3.30	3.70	
G	0.095	0.105	2.42	2.67	Straight Lead
	0.173	0.220	4.40	5.60	Bent

**Electrical Characteristics**

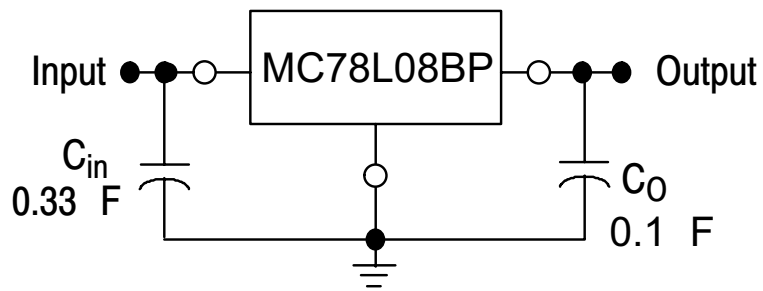
 ( $V_i=14V$ ,  $I_o=40mA$ ,  $0^\circ C < T_j < 125^\circ C$ ,  $C_i=0.33\mu F$ ,  $C_o=0.1\mu F$ , Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	$T_j=25^\circ C$	7.7	8.0	8.3	V
		$10.5V \leq V_1 \leq 23V$ , $I_o=1mA-40mA$	7.6	-	8.4	V
		$10.5V \leq V_1 \leq V_{MAX}$ $I_o=1mA-70mA$ (Note 1)	7.6	-	8.4	V
Load Regulation	$\Delta V_o$	$I_o=1mA-100mA$ , $T_j=25^\circ C$	-	15	80	mV
		$I_o=1mA-70mA$ , $T_j=25^\circ C$	-	8.0	40	mV
Line Regulation	$\Delta V_o$	$10.5V \leq V_1 \leq 23V$ , $T_j=25^\circ C$	-	10	175	mV
		$11.0V \leq V_1 \leq 23V$ , $T_j=25^\circ C$	-	8.0	125	mV
Quiescent Current	$I_q$		-	2.0	5.5	mA
Quiescent Current Change	$\Delta I_q$	$11V \leq V_1 \leq 23V$	-	-	1.5	mA
		$1mA \leq I_o \leq 40mA$	-	-	0.1	mA
Output Noise Voltage	$V_N$	$10Hz \leq f \leq 100KHz$	-	49	-	$\mu V$
Ripple Rejection	RR	$11V \leq V_1 \leq 23V$ , $f=120Hz$ , $T_j=25^\circ C$	39	70	-	dB
Dropout Voltage	$V_d$	$T_j=25^\circ C$	-	1.7	-	V

## Note:

1. Bypass Capacitors are Recommended for Optimum Stability and Transient Response and should be Located as Close as Possible to The Regulators

### Typcial Application



## Ordering Information

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

Note : Adding "-HF" Suffix for Halogen Free, eg. Part Number-BP-HF  
 Adding "-HF" Suffix for Halogen Free, eg. Part Number-AP-HF

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