



Micro Commercial Components

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# MC78L12BP

## Three-Terminal Low Current Positive Voltage Regulator

### Features

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

### Maximum Ratings

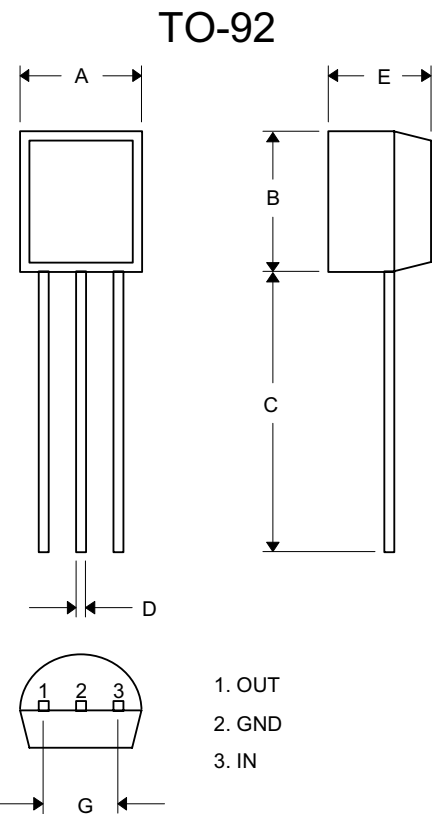
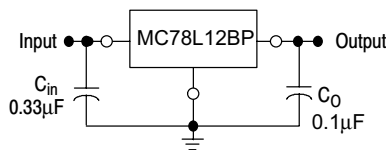
Parameter	Symbol	Value	Unit
Input Voltage	$V_1$	35	V
Operating Junction Temperature	$T_{OPR}$	-20---+120	°C
Storage Temperature Range	$T_{STG}$	-55---+150	°C

### Electrical Characteristics ( $V_1=19V$ , $I_o=500mA$ , $0^\circ C < T_j < 125^\circ C$ , $C_1=0.33\mu F$ , $C_o=0.1\mu F$ , unless otherwise specified)

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	$V_o$	11.5V	12V	12.5V	$T_j=25^\circ C$
		11.4V		12.6V	$14.5V \leq V_1 \leq 27V$ , $I_o=1mA-40mA$
		11.4V		12.6V	$14.5V \leq V_1 \leq V_{MAX}$ , $I_o=1mA-70mA$ (Note)
Load Regulation	$\Delta V_o$		25mV	150mV	$I_o=1mA-100mA$ , $T_j=25^\circ C$
			12mV	75mV	$I_o=1mA-40mA$ , $T_j=25^\circ C$
Line regulation	$\Delta V_o$		25mV	300mV	$14.5V \leq V_1 \leq 27V$ , $T_j=25^\circ C$
			20mV	250mV	$16V \leq V_1 \leq 27V$ , $T_j=25^\circ C$
Quiescent Current	$I_q$		2.0mA	6.0mA	$16V \leq V_1 \leq 27V$
				1.5mA	
Quiescent Current Change	$\Delta I_q$			0.1mA	$1mA \leq I_o \leq 40mA$
Output Noise Voltage	$V_N$		80uV		$10Hz \leq f \leq 100KHz$
Ripple Rejection	RR		37dB	65dB	$15V \leq V_1 \leq 25V$ $f=120Hz$ , $T_j=25^\circ C$
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:



DIM	DIMENSIONS				NOTE
	INCHES		MM		
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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