

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**Micro Commercial Components** 

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## MC78L12BP

### 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

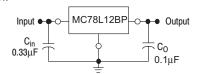
### **Maximum Ratings**

Parameter	Symbol	Value	Unit			
Input Voltage	V <sub>1</sub>	35	V			
Operating Junction Temperature	T <sub>OPR</sub>	-20+120	°C			
Storage Temperature Range	T <sub>STG</sub>	-55+150	$^{\circ}\mathbb{C}$			

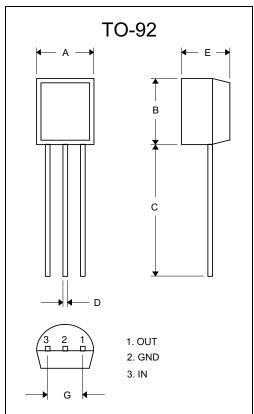
Electrical Characteristics( V:=19V, I:=500mA, 0°C <Tj<125°C, C1=0.33uF. Ca=0.1uF. unless otherwise specified)

v I—v.vvui , vv—v. iui , uiiivəə viiivi wiəv əpvviiivu)						
Parameter	Sym	Min	Тур	Max	Test conditions	
Output Voltage	V <sub>0</sub>	11.5V	12V	12.5V	T <sub>j</sub> =25°C	
		11.4V		12.6V	$14.5V \le V_1 \le 27V$ , $I_0=1mA-40mA$	
		11.4V		12.6V	$ \begin{array}{l} 14.5V \! \leq \! V_1 \! \leq \! V_{MAX}, \\ I_0 \! = \! 1mA \! - \! 70mA \text{ (Note)} \end{array} $	
Load Regulation	$\wedge V_0$		25mV	150mV	I <sub>o</sub> =1mA-100mA, T <sub>j</sub> =25°C,	
	△٧0		12mV	75mV	I <sub>o</sub> =1mA-40mA, Τ <sub>j</sub> =25°C,	
Line regulation	△V₀		25mV 20mV	300mV 250mV	$14.5V \le V_1 \le 27V$ , $T_j = 25^{\circ}C$ $16V \le V_1 \le 27V$ , $T_j = 25^{\circ}C$	
Quiescent Current	$I_{q}$ $\triangle I_{q}$		2.0mA	6.0mA 1.5mA	16V≦V <sub>1</sub> ≦27V	
Quiescent Current Change	$\triangle I_q$			0.1mA	$1mA \le I_o \le 40mA$	
Output Noise Voltage	V <sub>N</sub>		80uV		10Hz≦f≦100KHz	
Ripple Rejection	RR		37dB	65dB	15V≦V₁≦25V f=120Hz, T <sub>i</sub> =25°C	
Dropout	$V_d$		1.7V		T <sub>i</sub> =25°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**



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
Α	.175	.185	4.45	4.70	
В	.175	.185	4.46	4.70	
С	.500		12.7		
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	



### **Ordering Information**

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

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