

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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**MC78L12F** 

## **Features**

- Internal Short Circuit Current Limiting
- Internal Thermal Overload Protection
- No External Components Required
- Case Material:Molded Plastic. UL Flammability Classificatio Rating 94-0 and MSL Rating 1

### **Maximum Ratings**

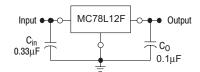
Parameter	Symbol	Value	Unit
Input Voltage	V <sub>1</sub>	35	V
Operating Junction Temperature	T <sub>OPR</sub>	-20+120	$^{\circ}\mathbb{C}$
Storage Temperature Range	T <sub>STG</sub>	-55+150	$^{\circ}\mathbb{C}$

Electrical Characteristics(  $V_i$ =19 $V_i$ ,  $I_0$ =500mA, 0 °C <Tj<125 °C, C1=0.33uF.  $C_0$ =0.1uF. unless otherwise specified)

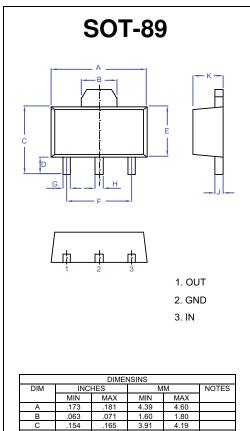
Parameter	Sym	Min	Тур	Max	Test conditions	
Output Voltage	V <sub>0</sub>	11.5V	12V	12.5V	T <sub>j</sub> =25°C	
		11.4V		12.6V	$14.5V \le V_1 \le 27V$ , $I_0=1mA-40mA$	
		11.4V		12.6V	14.5V≦V <sub>1</sub> ≦V <sub>MAX</sub> , I₀=1mA-70mA (Note)	
Load Regulation	△V₀		25mV	150mV	I <sub>o</sub> =1mA-100mA, T <sub>j</sub> =25°C,	
			12mV	75mV	I <sub>o</sub> =1mA-40mA, T <sub>j</sub> =25°C,	
Line regulation	$\triangle V_o$		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	l <sub>q</sub> ∆l <sub>q</sub>		2.0mA	6.0mA 1.5mA	16V≦V <sub>1</sub> ≦27V	
Quiescent Current Change	$\triangle I_q$			0.1mA	1mA≦I₀≦40mA	
Output Noise Voltage	V <sub>N</sub>		80uV		10Hz≦f≦100KHz	
Ripple Rejection	RR		37dB	65dB	15V≦V₁≦25V f=120Hz, Tj=25°C	
Dropout Voltage	$V_{d}$		1.7V		T <sub>j</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



DIMENSINS					
DIM	INCHES		MM		NOTES
	MIN	MAX	MIN	MAX	
Α	.173	.181	4.39	4.60	
В	.063	.071	1.60	1.80	
С	.154	.165	3.91	4.19	
D	.031	.039	0.80	1.00	
E	.092	.100	2.34	2.54	
F	.118		3.00		TYP
G	.013	.019	0.33	0.48	
Н	.015	.021	0.38	0.53	
J	.015	.016	0.38	0.41	
K	.055	.063	1.40	1.60	
					•



## **Ordering Information**

Device	Packing
(Part Number)-TP	Tape&Reel1Kpcs/Reel

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