



Micro Commercial Components

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# MC78L12F

## Three-Terminal Low Current Positive Voltage Regulator

### Features

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

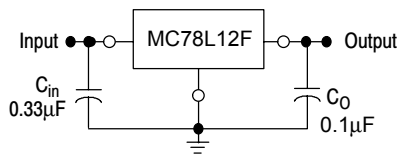
### Maximum Ratings

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

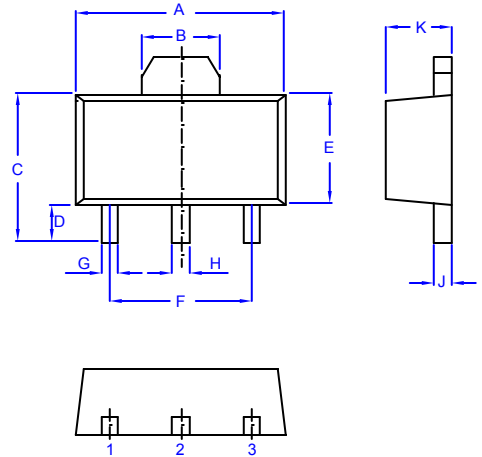
### Electrical Characteristics ( $V_1=19V, I_o=500mA, 0^\circ C < T_j < 125^\circ C, C_1=0.33\mu F, C_o=0.1\mu F$ , unless otherwise specified)

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 20mV	300mV 250mV	$14.5V \leq V_1 \leq 27V, T_j=25^\circ C$ $16V \leq V_1 \leq 27V, T_j=25^\circ C$
Quiescent Current	$I_q$ $\Delta I_q$		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:



### SOT-89



- 1. OUT
- 2. GND
- 3. IN

DIM	DIMENSIONS				NOTES
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.173	.181	4.39	4.60	
B	.063	.071	1.60	1.80	
C	.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	
H	.015	.021	0.38	0.53	
J	.015	.016	0.38	0.41	
K	.055	.063	1.40	1.60	



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