

**Features**

- Maximum Output current  $I_o:0.1A$
- 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**

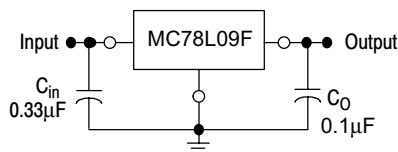
Parameter	Symbol	Value	Unit
Input Voltage	$V_1$	30	V
Operating Junction Temperature	$T_{OPR}$	-20---+120	°C
Storage Temperature Range	$T_{STG}$	-55---+150	°C

**Electrical Characteristics ( $V_i=15V, I_o=40mA, 0^\circ C < T_j < 125^\circ C, C_1=0.33\mu F, C_o=0.1\mu F, \text{ unless otherwise specified}$ )**

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	$V_o$	8.64V	9.0V	9.36V	$T_j=25^\circ C$
		8.55V		9.45V	$11.5V \leq V_1 \leq 24V, I_o=1mA-40mA$
		8.55V		9.45V	$11.5V \leq V_1 \leq V_{MAX}, I_o=1mA-70mA \text{ (Note)}$
Load Regulation	$\Delta V_o$		20mV	90mV	$I_o=1mA-100mA, T_j=25^\circ C,$
			10mV	45mV	$I_o=1mA-40mA, T_j=25^\circ C,$
Line regulation	$\Delta V_o$		90mV 100mV	200mV 150mV	$11.5V \leq V_1 \leq 24V, T_j=25^\circ C$ $13V \leq V_1 \leq 24V, T_j=25^\circ C$
Quiescent Current	$I_q$ $\Delta I_q$		2.0mA	6.0mA	$13V \leq V_1 \leq 24V$
				1.5mA	
Quiescent Current Change	$\Delta I_q$			0.1mA	$1mA \leq I_o \leq 40mA$
Output Noise Voltage	$V_N$		49uV		$10Hz \leq f \leq 100KHz$
Ripple Rejection	RR		38dB	44dB	$12V \leq V_1 \leq 23V, f=120Hz, T_j=25^\circ C$
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

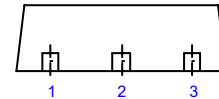
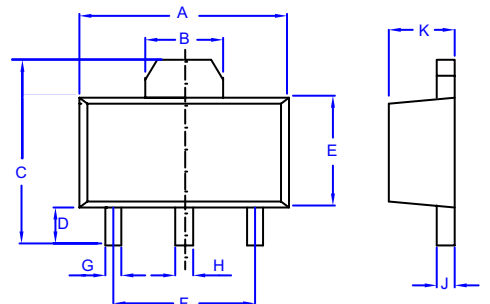
**Typical Application:**



**MC78L09F**

**Three-Terminal Low Current Positive Voltage Regulator**

**SOT-89**



1. OUT
2. GND
3. IN

DIM	DIMENSIONS				NOTES
	INCHES		MM		
A	.173	.181	4.39	4.60	
B	.063	.071	1.60	1.80	
C	.154	.165	3.91	4.25	
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	



Micro Commercial Components

## Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;1Kpcs/Reel

### \*\*\*IMPORTANT NOTICE\*\*\*

*Micro Commercial Components Corp.* reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. *Micro Commercial Components Corp.* does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold *Micro Commercial Components Corp.* and all the companies whose products are represented on our website, harmless against all damages.

### \*\*\*APPLICATIONS DISCLAIMER\*\*\*

Products offer by *Micro Commercial Components Corp.* are not intended for use in Medical, Aerospace or Military Applications.

[www.mccsemi.com](http://www.mccsemi.com)