

MC78L06F

Features

- Internal Short Circuit Current Limiting
- Internal Thermal Overload Protection
- No External Components Required

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

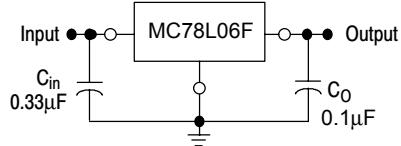
Electrical Characteristics ($V_1=12V$, $I_o=40mA$, $0^{\circ}C < T_j < 125^{\circ}C$,

$C1=0.33\mu F$, $C0=0.1\mu F$, unless otherwise specified)

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V_0	5.75V	6.0V	6.25V	$T_j=25^{\circ}C$
		5.7V		6.3V	$8.5V \leq V_1 \leq 20V$, $I_o=1mA-40mA$
		5.7V		6.3V	$8.5V \leq V_1 \leq V_{MAX}$, $I_o=1mA-70mA$ (Note)
Load Regulation	ΔV_o		12.8mV	80mV	$I_o=1mA-100mA$, $T_j=25^{\circ}C$
			5.8mV	40mV	$I_o=1mA-70mA$, $T_j=25^{\circ}C$
Line regulation	ΔV_o		64mV 54mV	175mV 125mV	$8.5V \leq V_1 \leq 20V$, $T_j=25^{\circ}C$ $9V \leq V_1 \leq 20V$, $T_j=25^{\circ}C$
Quiescent Current	I_q ΔI_q		3.9mA	6.0mA 1.5mA	$9V \leq V_1 \leq 20V$
Quiescent Current Change	ΔI_q			0.1mA	$1mA \leq I_o \leq 40mA$
Output Noise Voltage	V_N		49uV		$10Hz \leq f \leq 100KHz$
Ripple Rejection	RR	41dB	46dB		$8V \leq V_1 \leq 20V$ $f=120Hz$, $T_j=25^{\circ}C$
Dropout Voltage	V_d		1.7V		$T_j=25^{\circ}C$

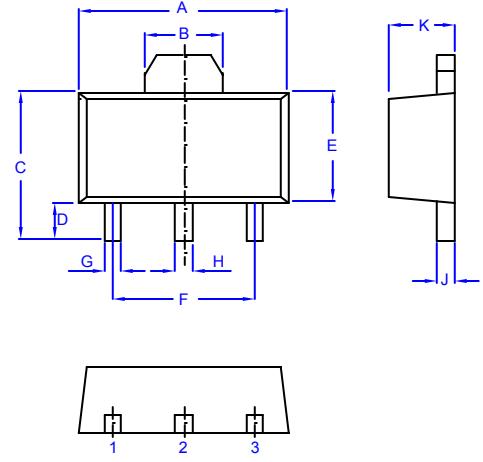
Note: Bypass Capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators

Typical Application:



Three-Terminal Low Current Positive Voltage Regulator

SOT-89



1. OUT
2. GND
3. IN

DIM	DIMENSINS				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	