



Micro Commercial Components
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MC78L05F

Features

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

Maximum Ratings

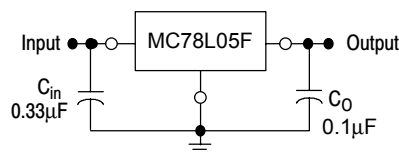
Parameter	Symbol	Value	Unit
Input Voltage (Vo=5.8V)	V ₁	30	V
Operating Junction Temperature	T _{OPR}	-20---+120	°C
Storage Temperature Range	T _{STG}	-55---+150	°C

Electrical Characteristics (V₁=10V, I_o=40mA, 0°C < T_j < 125°C, C₁=0.33µF, C_o=0.1µF, unless otherwise specified)

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V _o	4.8V	5.0V	5.2V	T _j =25°C
		4.7V		5.25V	7V ≤ V ₁ ≤ 20V, I _o =1mA-40mA
		5.0V		5.25V	7V ≤ V ₁ ≤ V _{MAX} , I _o =1mA-700mA (Note)
Load Regulation	ΔV _o		11mV	60mV	I _o =1mA-100mA, T _j =25°C
			5.0mV	30mV	I _o =1mA-40mA, T _j =25°C
Line regulation	ΔV _o		8mV	150mV	7V ≤ V ₁ ≤ 20V, T _j =25°C
			6mV	100mV	8V ≤ V ₁ ≤ 20V, T _j =25°C
Quiescent Current	I _q ΔI _q		2.0mA	5.5mA	8V ≤ V ₁ ≤ 20V
				1.5mA	
Quiescent Current Change	ΔI _q			0.1mA	1mA ≤ I _o ≤ 40mA
Output Noise Voltage	V _N		40µV		10Hz ≤ f ≤ 100KHz
Ripple Rejection	RR	41dB	80dB		8V ≤ V ₁ ≤ 20V f=120Hz, T _j =25°C
Dropout Voltage	V _d		1.7V		T _j =25°C

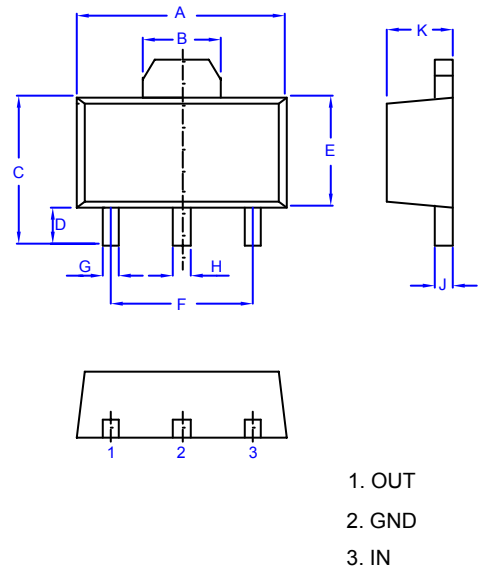
*Note: Bypass Capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators

Typical Application:



Three-Terminal Low Current Positive Voltage Regulator

SOT-89



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	

Figure 1. Representative Schematic Diagram

