



Micro Commercial Components

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MC78L05F

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

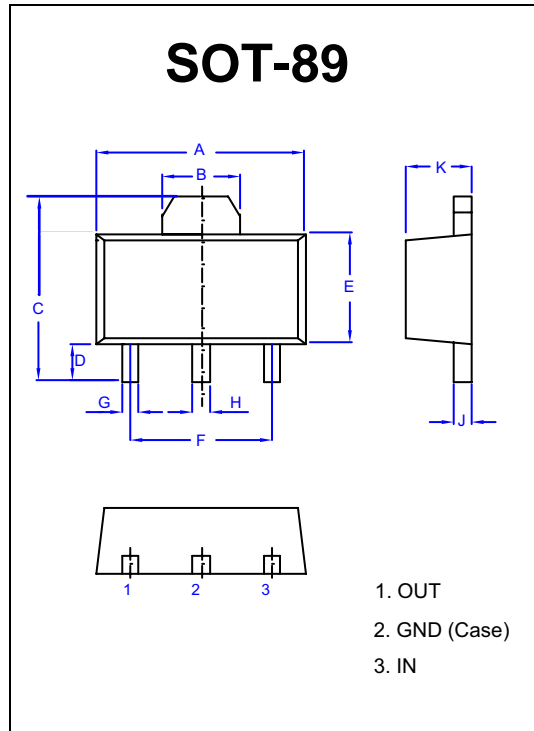
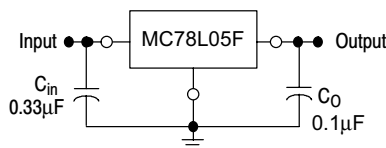
Maximum Ratings

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

Electrical Characteristics (V_I=10V, I_o=40mA, 0°C <T_j<125°C, C₁=0.33uF, C_o=0.1uF, 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 _I ≤ 20V, I _o =1mA-40mA
		5.0V		5.25V	7V ≤ V _I ≤ 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 _I ≤ 20V, T _j =25°C
			6mV	100mV	8V ≤ V _I ≤ 20V, T _j =25°C
Quiescent Current	I _q		2.0mA	5.5mA	8V ≤ V _I ≤ 20V
			ΔI _q		
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 _I ≤ 20V f=120Hz, T _j =25°C
Dropout Voltage	V _d		1.7V		T _j =25°C

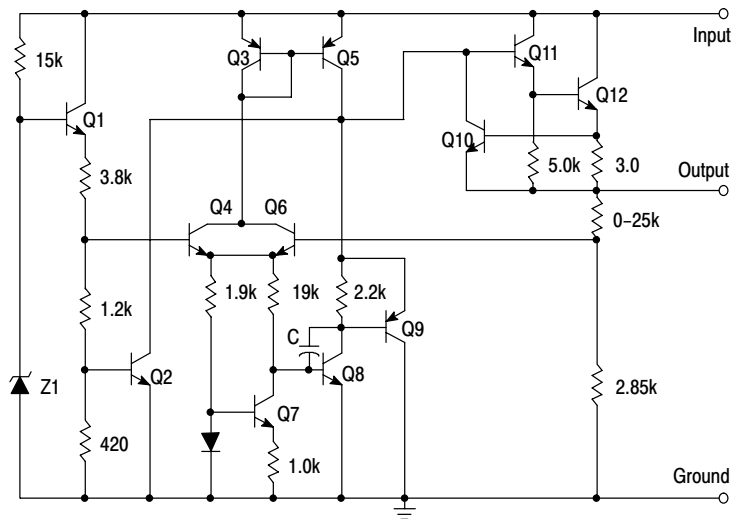
*Note: Bypass Capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators
 Typical Application:



DIM	DIMENSIONS				NOTES
	INCHES		MM		
A	.173	.181	4.39	4.60	
B	.061	-----	1.55	-----	REF.
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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Figure 1. Representative Schematic Diagram





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