



Micro Commercial Components

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MC78L05BP

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

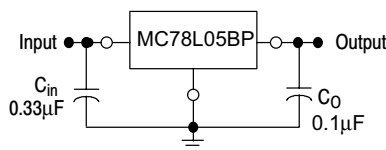
Parameter	Symbol	Value	Unit
Input Voltage (Vo=5.8V)	V ₁	30	V
Operating Junction Temperature	T _{OPR}	-20---+120	°C
Storage Temperature Range	T _{STG}	-55---+150	°C

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

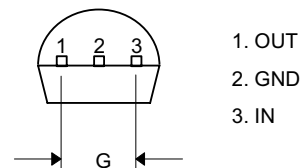
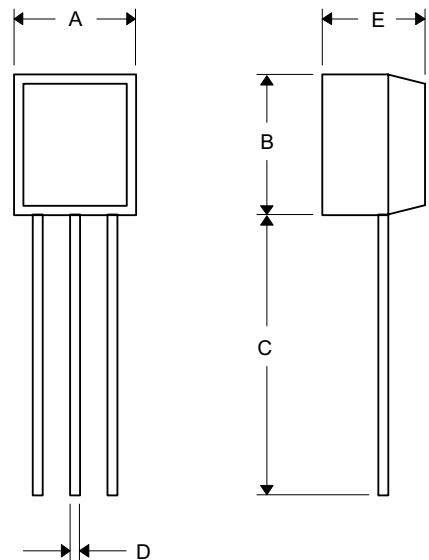
Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V _o	4.8V	5.0V	5.2V	T _j =25°C
		4.7V		5.25V	7V ≤ V ₁ ≤ 20V, I _o =1mA-40mA
		5.0V		5.25V	7V ≤ V ₁ ≤ V _{MAX} , I _o =1mA-700mA (Note)
Load Regulation	ΔV _o		11mV	60mV	I _o =1mA-100mA, T _j =25°C,
			5.0mV	30mV	I _o =1mA-40mA, T _j =25°C
Line regulation	ΔV _o		8mV 6mV	150mV 100mV	7V ≤ V ₁ ≤ 20V, T _j =25°C 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:



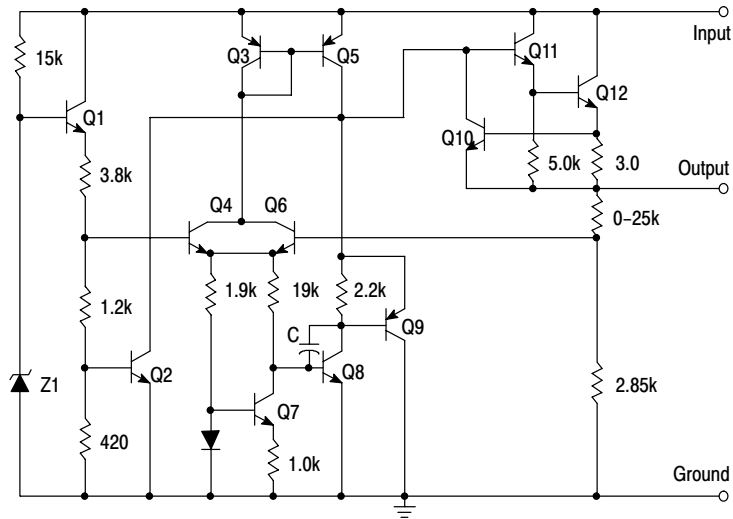
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DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

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Figure 1. Representative Schematic Diagram





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