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

Maximum Ratings

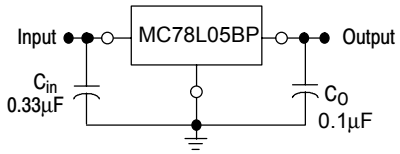
Parameter	Symbol	Value	Unit
Input Voltage (Vo=5.8V)	V_1	30	V
Operating Junction Temperature	T_{OPR}	-20---+120	℃
Storage Temperature Range	T_{STG}	-55---+150	℃

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

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V_0	4.8V	5.0V	5.2V	T_j=25°C
		4.7V 5.0V		5.25V	7V≦V_1≦20V, I_o=1mA-40mA
		4.7V 5.0V		5.25V	7V≦V_1≦V_{MAX}, I_o=1mA-700mA (Note)
Load Regulation	$\triangle V_o$		11mV	60mV	I_o=1mA-100mA, T_j=25°C,
			5.0mV	30mV	I_o=1mA-40mA, T_j=25°C
Line regulation	$\triangle V_o$		8mV 6mV	150mV 100mV	7V≦V_1≦20V, T_j=25°C 8V≦V_1≦20V, T_j=25°C
Quiescent Current	I_q $\triangle I_q$		2.0mA	5.5mA 1.5mA	8V≦V_1≦20V
Quiescent Current Change	$\triangle I_q$			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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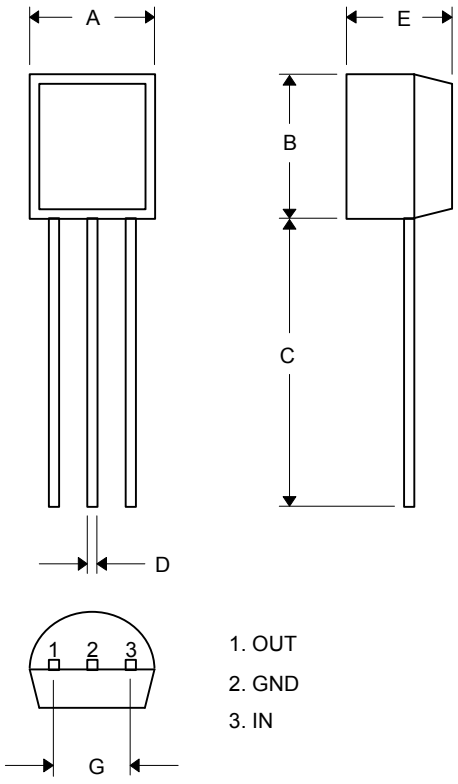

DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

Figure 1. Representative Schematic Diagram