

**Micro Commercial Components** 

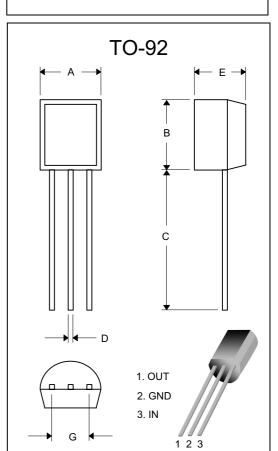
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# MC78L05BP

# Three-Terminal Low Current Positive Voltage Regulator



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

# Features

- Internal Short Circuit Current Limiting
- Internal Thermal Overload Protection
- No External Components Required
- Case Material: Molded Plastic. UL Flammability Classificatio Rating 94-0 and MSL Rating 1
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

## **Maximum Ratings**

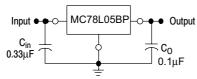
Parameter	Symbol	Value	Unit			
Input Voltage (Vo=5.8V)	V <sub>1</sub>	30	V			
Operating Junction Temperature	T <sub>OPR</sub>	-20+120	$^{\circ}\mathbb{C}$			
Storage Temperature Range	T <sub>STG</sub>	-55+150	$^{\circ}\mathbb{C}$			

# Electrical Characteristics( $V_i$ =10V, $I_0$ =40mA, 0 °C <Tj<125 °C, C1=0.33uF, $C_0$ =0.1uF, unless otherwise specified)

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Parameter	Sym	Min	Тур	Max	Test conditions	
		4.8V	5.0V	5.2V	T <sub>j</sub> =25°C	
Output Voltage	V <sub>0</sub>	4.7V 5.0V		5.25V	$7V \le V_1 \le 20V$ , $I_0=1mA-40mA$	
3.		4.7V 5.0V		5.25V	$7V \le V_1 \le V_{MAX}$ , $I_0=1mA-700mA$ (Note)	
Load	$\triangle V_{o}$		11mV	60mV	l₀=1mA-100mA, T <sub>i</sub> =25°C,	
Regulation	△••		5.0mV	30mV	l₀=1mA-40mA, Tj=25°C	
Line regulation	$\triangle V_o$		8mV 6mV	150mV 100mV	$7V \le V_1 \le 20V, T_j = 25^{\circ}C$ $8V \le V_1 \le 20V, T_j = 25^{\circ}C$	
Quiescent Current	l <sub>q</sub> △l <sub>q</sub>		2.0mA	5.5mA 1.5mA	8V≦V <sub>1</sub> ≦20V	
Quiescent Current Change	$\triangle I_q$			0.1mA	1mA≦I₀≤40mA	
Output Noise Voltage	V <sub>N</sub>		40μV		10Hz≦f≦100KHz	
Ripple Rejection	RR	41dB	80dB		8V≦V₁≦20V f=120Hz, T <sub>j</sub> =25°C	
Dropout Voltage	$V_{d}$		1.7V		T <sub>j</sub> =25°C	

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

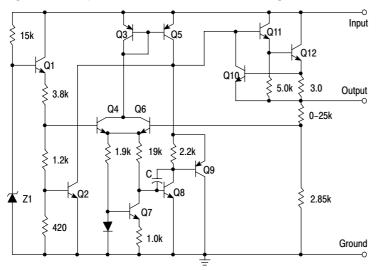
Typical Application:



# MC78L05BP



Figure 1. Representative Schematic Diagram





# **Ordering Information**

Device	Packing
(Part Number)-AP	Ammo Packing;2Kpcs/AmmoBox
(Part Number)-BP	Bulk;1Kpcs/Bag

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