



THE DATASHEET OF MC78L05BP-AP





Features

- Halogen free available upon request by adding suffix "-HF"
- Internal Short Circuit Current Limiting
- Internal Thermal Overload Protection
- No External Components Required
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

Maximum Ratings

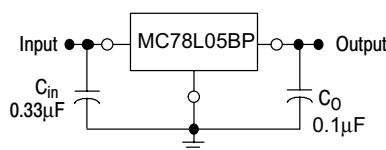
Parameter	Symbol	Value	Unit
Input Voltage ($V_o=5.8V$)	V_1	30	V
Operating Junction Temperature	T_{OPR}	-20---+120	°C
Storage Temperature Range	T_{STG}	-55---+150	°C

Electrical Characteristics($V_i=10V$, $I_o=40mA$, $0^\circ C < T_j < 125^\circ C$, $C_1=0.33\mu F$, $C_o=0.1\mu F$, unless otherwise specified)

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V_o	4.8V	5.0V	5.2V	$T_j=25^\circ C$
		4.7V		5.25V	$7V \leq V_1 \leq 20V$, $I_o=1mA-40mA$
		5.0V		5.25V	$7V \leq V_1 \leq V_{MAX}$, $I_o=1mA-700mA$ (Note)
		4.7V		5.25V	$I_o=1mA-100mA$, $T_j=25^\circ C$
Load Regulation	ΔV_o		11mV	60mV	$I_o=1mA-40mA$, $T_j=25^\circ C$
			5.0mV	30mV	$I_o=1mA-40mA$, $T_j=25^\circ C$
Line regulation	ΔV_o		8mV 6mV	150mV 100mV	$7V \leq V_1 \leq 20V$, $T_j=25^\circ C$ $8V \leq V_1 \leq 20V$, $T_j=25^\circ C$
Quiescent Current	I_q ΔI_q		2.0mA	5.5mA 1.5mA	$8V \leq V_1 \leq 20V$
Quiescent Current Change	ΔI_q			0.1mA	$1mA \leq I_o \leq 40mA$
Output Noise Voltage	V_N		40μV		$10Hz \leq f \leq 100KHz$
Ripple Rejection	RR	41dB	80dB		$8V \leq V_1 \leq 20V$ $f=120Hz$, $T_j=25^\circ C$
Dropout Voltage	V_d		1.7V		$T_j=25^\circ C$

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

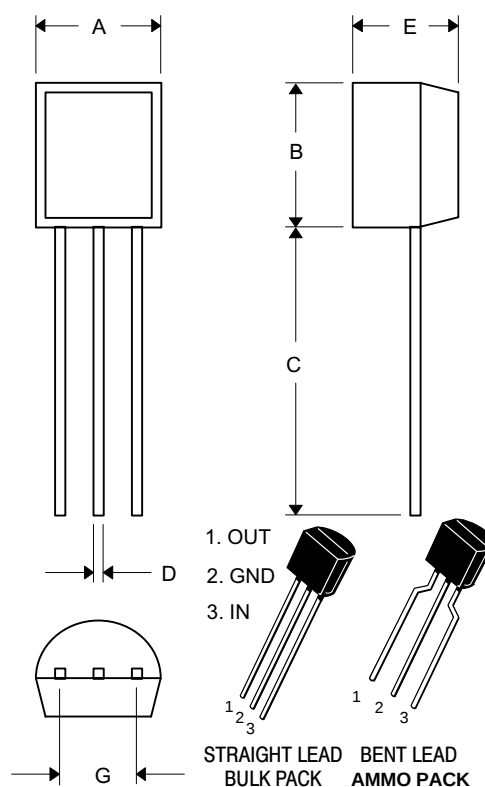
Typical Application:



MC78L05BP

Three-Terminal Low Current Positive Voltage Regulator

TO-92



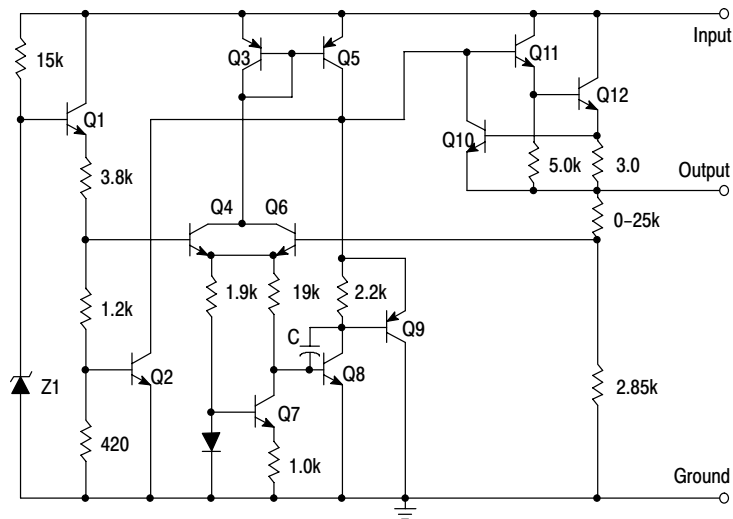
DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

* For ammo packing detailed specification, click here to visit our website of product packaging for details.

MC78L05BP

Figure 1. Representative Schematic Diagram



Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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