



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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

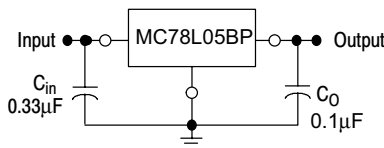
| Parameter | Symbol | Value | Unit |
|--------------------------------|------------------|------------|------|
| Input Voltage (Vo=5.8V) | V ₁ | 30 | V |
| Operating Junction Temperature | T _{OPR} | -20---+120 | °C |
| Storage Temperature Range | T _{STG} | -55---+150 | °C |

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

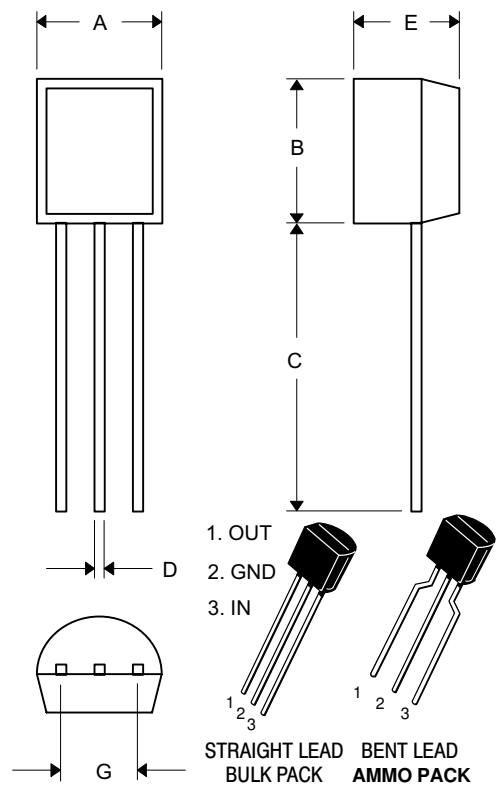
Typical Application:



MC78L05BP

Three-Terminal Low Current Positive Voltage Regulator

TO-92



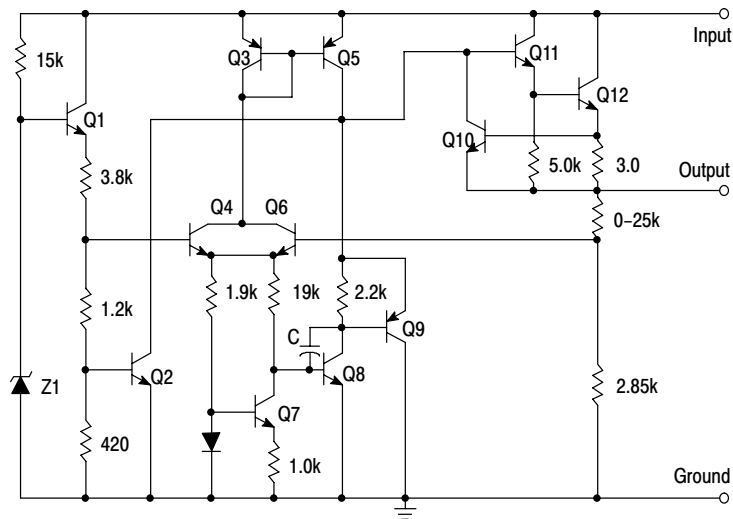
DIMENSIONS

| 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





Micro Commercial Components

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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