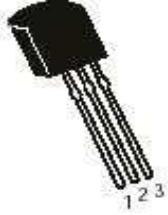


VOLTAGE REGULATOR



pin 1.Output
2.Ground
3.Input

LM78L05

**TO-92
Plastic Package**

The Voltages Available allow these Regulators to be used in Logic Systems, Instrumentation, Hi-Fi Audio Circuits and other Solid State Electronic Equipment

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

| DESCRIPTION | SYMBOL | VALUE | UNIT |
|---------------------------------|-----------|--------------|------------------|
| Input Voltage | V_{IN} | 30 | V |
| Power Dissipation | P_D | 625 | mW |
| Junction to Ambient in free air | T_{amb} | - 20 to +80 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 55 to +150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise)

| DESCRIPTION | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|--------------------------|------------------|---|------|-----|------|---------------|
| Output Voltage | V_O | $V_I=10\text{V}, I_O=40\text{mA}$ | 4.80 | | 5.20 | V |
| | | $I_O=1\text{mA to }40\text{mA}, 0^\circ\text{C to }125^\circ\text{C}$ | 4.75 | | 5.25 | V |
| | | $V_I=7\text{V to }20\text{V}, 0^\circ\text{C to }125^\circ\text{C}$ | 4.75 | | 5.25 | V |
| Ripple Rejection | R_R | $V_I=8\text{V to }18\text{V}, f=120\text{Hz}$ | 41 | | | dB |
| Line Regulation | R_{BGIN} | $V_I=7\text{V to }20\text{V}, I_O=40\text{mA}$ | | | 150 | mV |
| | | $V_I=8 \text{ to } 20\text{V}$ | | | 100 | mV |
| Load Regulation | R_{BGL} | $I_O=1\text{mA to }100\text{mA}, V_I=10\text{V}$ | | | 60 | mV |
| | | $I_O=1\text{mA to }40\text{mA}$ | | | 30 | mV |
| Output Noise Voltage | V_{NO} | $f=10\text{Hz to }100\text{KHz}$ | | 42 | | μV |
| Dropout Voltage | $V_{DIF (min)}$ | $V_I=10\text{V}, I_O=40\text{mA}$ | | 1.7 | | V |
| Quiescent Current | I_Q | $V_I=10\text{V}, I_O=40\text{mA}, T_a=25^\circ\text{C}$ | | | 6.0 | mA |
| | | $V_I=10\text{V}, I_O=40\text{mA}, T_a=125^\circ\text{C}$ | | | 5.5 | mA |
| Quiescent Current Change | ΔI_{QIN} | $V_I=8\text{V to }20\text{V}, I_O=40\text{mA}, T_a=0^\circ\text{C to }125^\circ\text{C}$ | | | 1.5 | mA |
| | ΔI_{QL} | $I_O=1\text{mA to }40\text{mA}, V_I=10\text{V}, T_a=0^\circ\text{C to }125^\circ\text{C}$ | | | 0.1 | mA |

LM78L05Rev041004E

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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