

描述 / Descriptions

SOT-89 塑封封装电压调整器。Voltage Regulator in a SOT-89 Plastic Package.

特征 / Features

三端稳压调整器，输出电流高达 100mA,内设过热保护和短路限制。

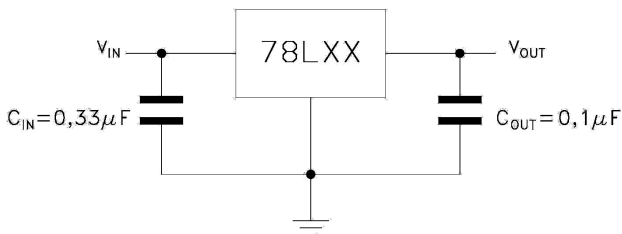
3-Terminal regulators ,output current up to 100 mA, internal thermal overload protection and short-circuit limiting.

用途 / Applications

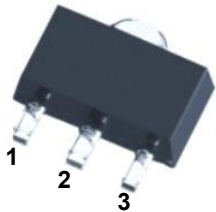
电压调整器。

Voltage Regulator.

内部等效电路 /应用电路 / Equivalent Circuit or Application Circuit



引脚排列 / Pinning



PIN 1 : OUT PIN 2 : GND PIN 3 : IN

印章代码 / Marking

| | |
|---------|--------|
| Marking | HL05 * |
|---------|--------|

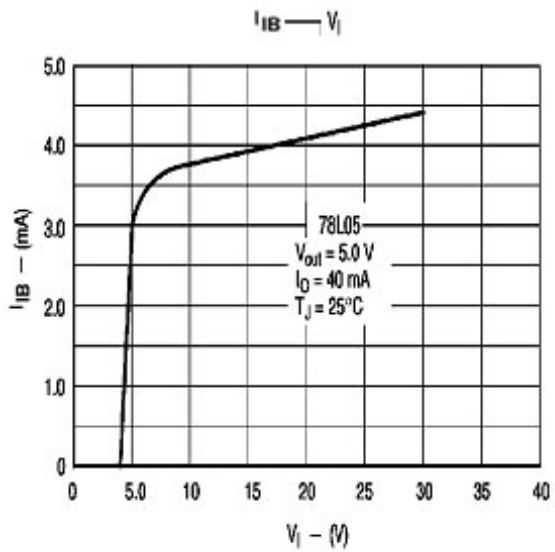
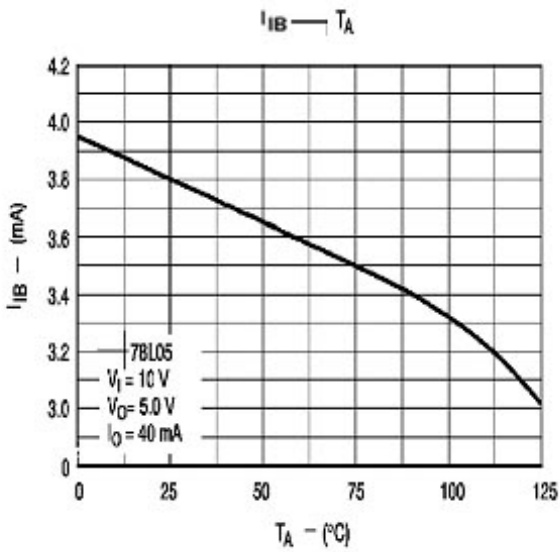
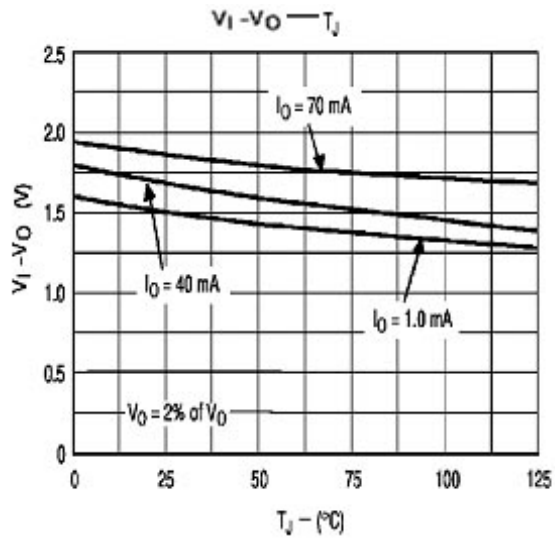
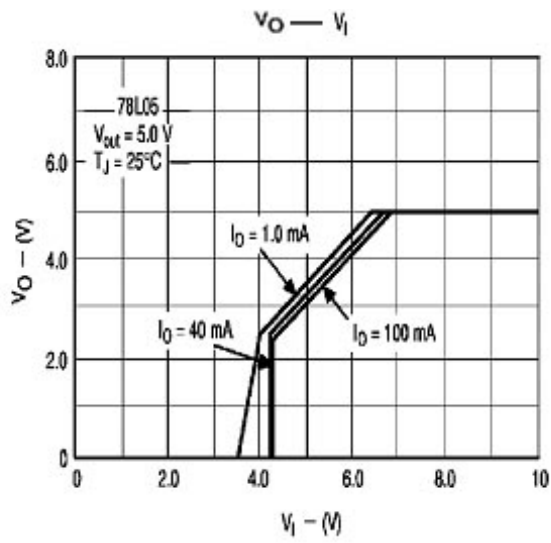
极限参数 / Absolute Maximum Ratings(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 数值 Rating | 单位 Unit |
|--|--------------|--------------|------------|
| Input voltage | V_i | 30 | V |
| Output current | I_o | 100 | mA |
| Operating virtual Junction temperature | T_j | 0~125 | °C |
| Power Dissipation | P_D | 500 | mW |
| Storage temperature range | T_{stg} | -65~150 | °C |

电性能参数 / Electrical Characteristics(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 测试条件 Test Conditions | 最小值 Min | 典型值 Typ | 最大值 Max | 单位 Unit |
|----------------------|--------------|---|------------|------------|------------|------------|
| Output voltage | V_o | $I_o=40mA$ $T_j=25^\circ C$ | 4.80 | 5.0 | 5.2 | V |
| | | $I_o=1mA$ to 40mA $V_i=7V$ to 20V | 4.75 | 5.0 | 5.25 | V |
| | | $I_o=1mA$ to 70mA $V_i=10V$ | 4.75 | 5.0 | 5.25 | V |
| Input regulation | ΔV_o | $V_i=7V$ to 20V $T_j=25^\circ C$ | | 32 | 150 | mV |
| | | $V_i=8V$ to 20V $T_j=25^\circ C$ | | 26 | 100 | mV |
| Output regulation | ΔV_o | $I_o=1mA$ to 100mA $T_j=25^\circ C$ | | 15 | 60 | mV |
| | | $I_o=1mA$ to 40 mA $T_j=25^\circ C$ | | 8 | 30 | mV |
| Ripple rejection | RR | $V_i=8V$ to 18V $f=120Hz$ $T_j=25^\circ C$ | 41 | 49 | | dB |
| Output noise voltage | V_N | $f=10Hz\sim 100KHz$ $T_j=25^\circ C$ | | 42 | | μV |
| Dropout voltage | V_D | $T_j=25^\circ C$ | | 1.7 | | V |
| Bias current | I_Q | $T_j=25^\circ C$ | | 3.8 | 6 | mA |
| | | $T_j=125^\circ C$ | | | 5.5 | mA |
| Bias current change | ΔI_Q | $V_i=8V$ to 20V | | | 1.5 | mA |
| | | $I_o=1mA$ to 40mA | | | 0.1 | mA |

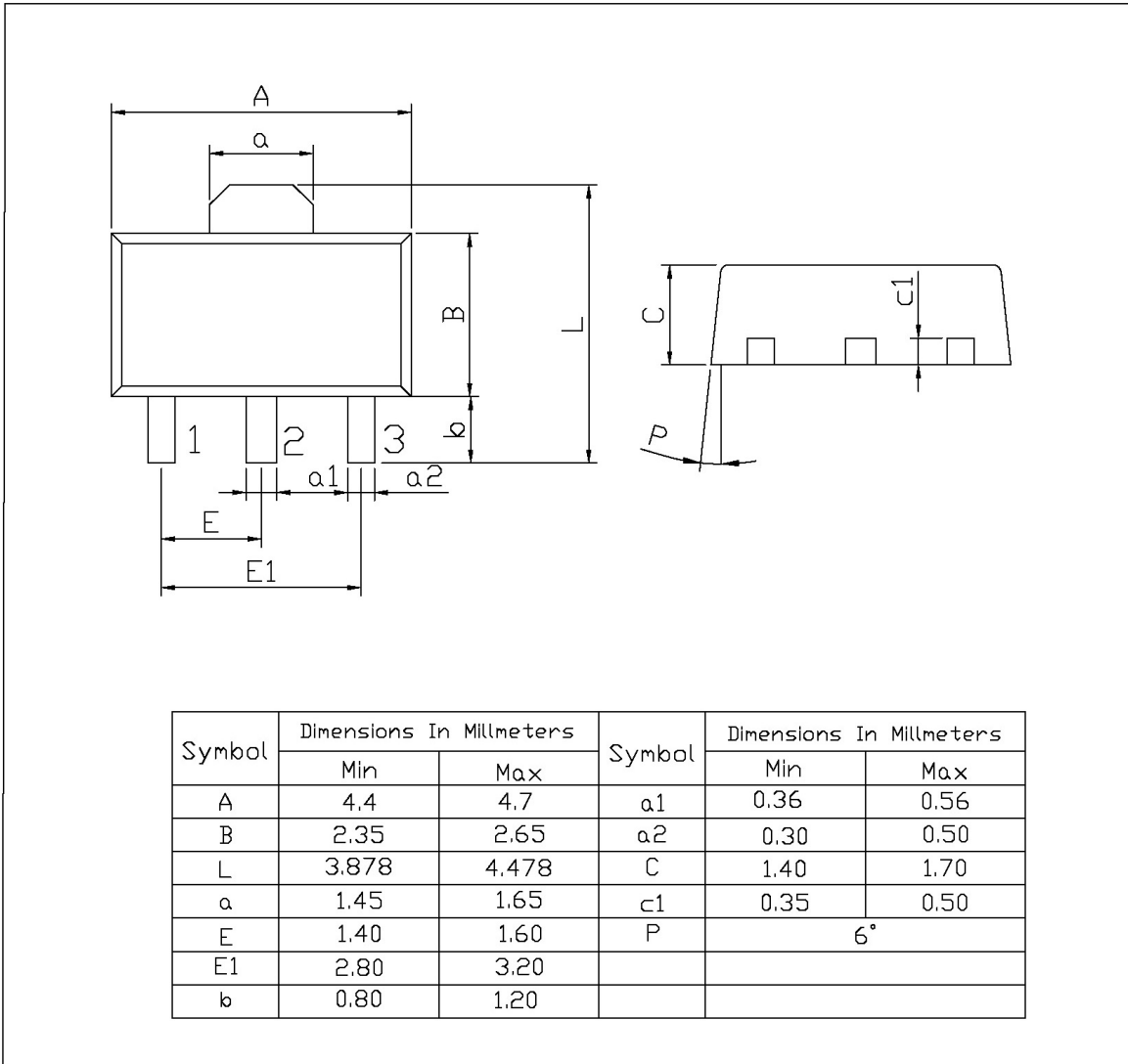
电参数曲线图 / Electrical Characteristic Curve



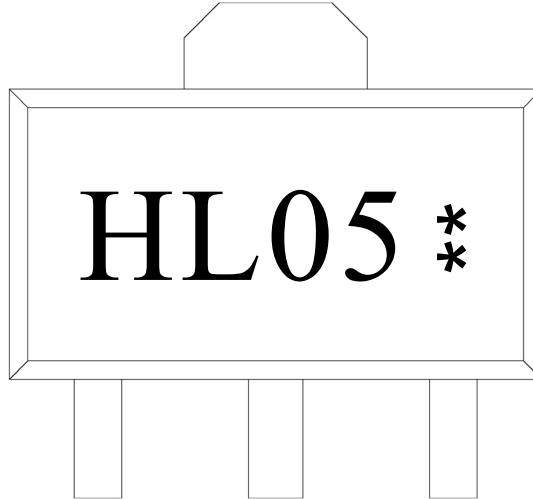
外形尺寸图 / Package Dimensions

SOT-89

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

L05： 为型号代码

**： 为生产批号代码，随生产批号变化。

Note:

H: Company Code.

L05: Product Type Code.

** : Lot No. Code, code change with Lot No.

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm ³) | | |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
| | Units/Reel 只/卷盘 | Reels/Inner Box 卷盘/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Reel | Inner Box 盒 | Outer Box 箱 |
| SOT-89 | 1,000 | 7 | 7,000 | 8 | 56,000 | 7" x12 | 180×120×180 | 385×257×392 |

使用说明 / Notices