

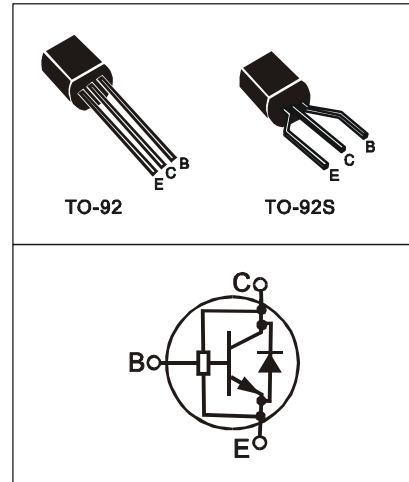
**NPN D 系列晶体管/ D SERIES TRANSISTORS**

**BLD123D**

- 特点：耐压高 开关速度快 安全工作区宽 符合 RoHS 规范
- FEATURES: ■HIGH VOLTAGE CAPABILITY ■HIGH SPEED SWITCHING ■WIDE SOA ■RoHS COMPLIANT
- 应用：电子镇流器 节能灯
- APPLICATIONS: ■ELECTRONIC BALLAST ■FLUORESCENT LAMP

●最大额定值 (Tc=25°C)  
●Absolute Maximum Ratings (Tc=25°C) TO-92/TO-92S

| 参数<br>PARAMETER                        | 符号<br>SYMBOL     | 额定值<br>VALUE | 单位<br>UNIT |
|--|------------------|--------------|------------|
| 集电极-基极电压<br>Collector-Base Voltage     | V <sub>CB0</sub> | 600          | V          |
| 集电极-发射极电压<br>Collector-Emitter Voltage | V <sub>CEO</sub> | 400          | V          |
| 发射极-基极电压<br>Emitter-Base Voltage       | V <sub>EBO</sub> | 9            | V          |
| 集电极电流<br>Collector Current             | I <sub>C</sub>   | 2.0          | A          |
| 集电极耗散功率<br>Total Power Dissipation     | P <sub>tot</sub> | 18           | W          |
| 最高工作温度<br>Junction Temperature         | T <sub>j</sub>   | 150          | °C         |
| 贮存时间<br>Storage Temperature            | T <sub>stg</sub> | -65-150      | °C         |



●电特性 (Tc=25°C)  
●Electrical Characteristics (Tc=25°C)

| 参数名称<br>CHARACTERISTIC                              | 符号<br>SYMBOL       | 测试条件<br>TEST CONDITION                                 | 最小值<br>MIN | 最大值<br>MAX | 单位<br>UNIT |
|---|--------------------|--|------------|------------|------------|
| 集电极-基极截止电流<br>Collector-Base Cutoff Current         | I <sub>CB0</sub>   | V <sub>CB</sub> =600V                                  |            | 10         | μA         |
| 集电极-发射极截止电流<br>Collector-Emitter Cutoff Current     | I <sub>CEO</sub>   | V <sub>CE</sub> =400V, I <sub>B</sub> =0               |            | 30         | μA         |
| 集电极-发射极电压<br>Collector-Emitter Voltage              | V <sub>CEO</sub>   | I <sub>C</sub> =10mA, I <sub>B</sub> =0                | 400        |            | V          |
| 发射极-基极电压<br>Emitter-Base Voltage                    | V <sub>EBO</sub>   | I <sub>E</sub> =1mA, I <sub>C</sub> =0                 | 9          |            | V          |
| 集电极-发射极饱和电压<br>Collector-Emitter Saturation Voltage | V <sub>cesat</sub> | I <sub>C</sub> =200mA, I <sub>B</sub> =20mA            |            | 0.3        | V          |
|   |                    | I <sub>C</sub> =0.5A, I <sub>B</sub> =0.1A             |            | 0.4        |            |
|   |                    | I <sub>C</sub> =1.5A, I <sub>B</sub> =0.5A             |            | 0.9        |            |
| 发射极-基极饱和电压<br>Base-Emitter Saturation Voltage       | V <sub>besat</sub> | I <sub>C</sub> =0.5A, I <sub>B</sub> =0.1A             |            | 1.2        | V          |
| 电流放大倍数<br>DC Current Gain                           | h <sub>FE</sub>    | V <sub>CE</sub> =5V, I <sub>C</sub> =1mA               | 7          |            |            |
|   |                    | V <sub>CE</sub> =5V, I <sub>C</sub> =0.2A              | 10         | 40         |            |
|   |                    | V <sub>CE</sub> =5V, I <sub>C</sub> =2.0A              | 5          |            |            |
| 贮存时间/Storage Time                                   | t <sub>s</sub>     | V <sub>CC</sub> =5V, I <sub>C</sub> =0.25A<br>(UI9600) | 2.0        | 4.0        | μs         |
| 下降时间 Falling Time                                   | t <sub>f</sub>     |  |            | 0.8        | μs         |
| 内置二极管正向压降/<br>Diode Forward Voltage                 | V <sub>F</sub>     | I <sub>F</sub> =1.0A                                   |            | 2.2        | V          |

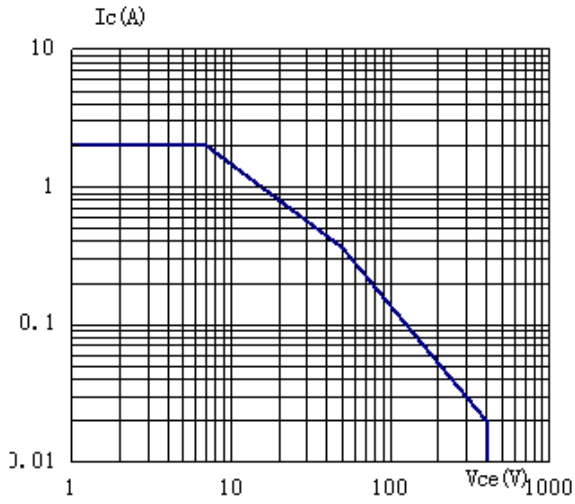
●订单信息/ORDERING INFORMATION:

| 包装形式/PACKING                      | 订货编码/ORDERING CODE             |                     |
|-----------------------------------|--------------------------------|---------------------|
|                                   | 普通塑封料/ Normal Package Material | 无卤塑封料/Halogen Free  |
| TO-92 普通袋装/NORMAL PACKING         | BLD123D TO-92                  | BLD123D TO-92-HF    |
| <b>TO-92S</b> 普通袋装/NORMAL PACKING | BLD123D TO-92S                 | BLD123D TO-92S-HF   |
| TO-92 盒式编带/AMMOPACK               | BLD123D TO-92-AP               | BLD123D TO-92-AP-HF |

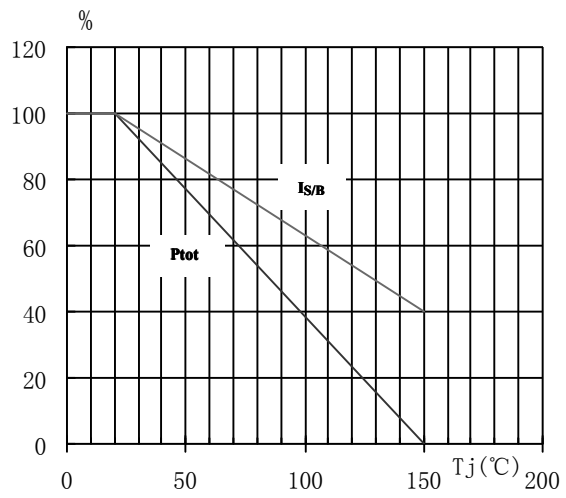
NPN D 系列晶体管 / D SERIES TRANSISTORS

BLD123D

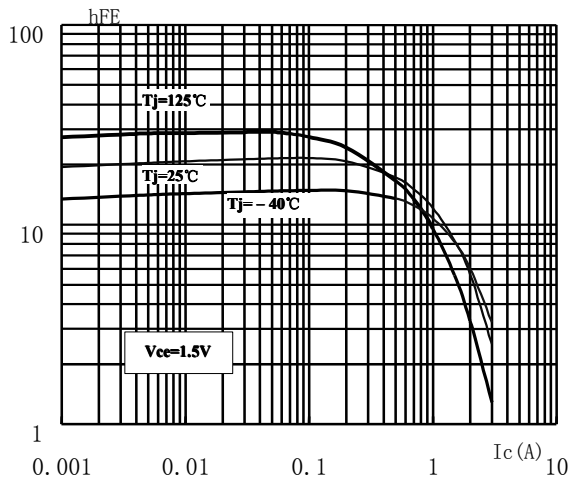
SOA (DC)



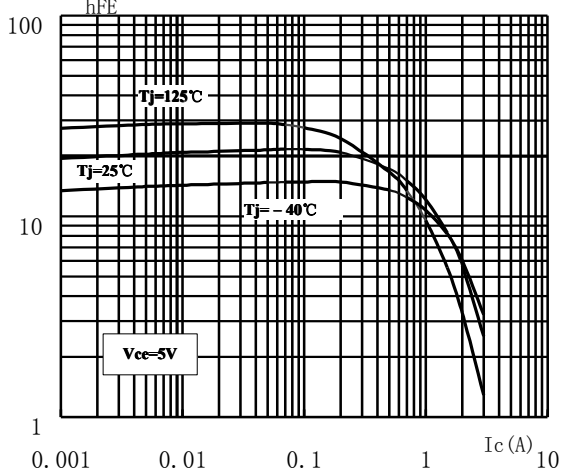
$P_{tot} \propto T_j$



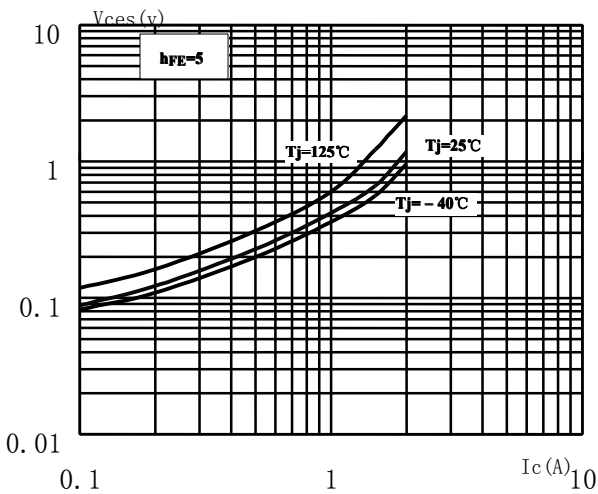
$h_{FE} - I_c$



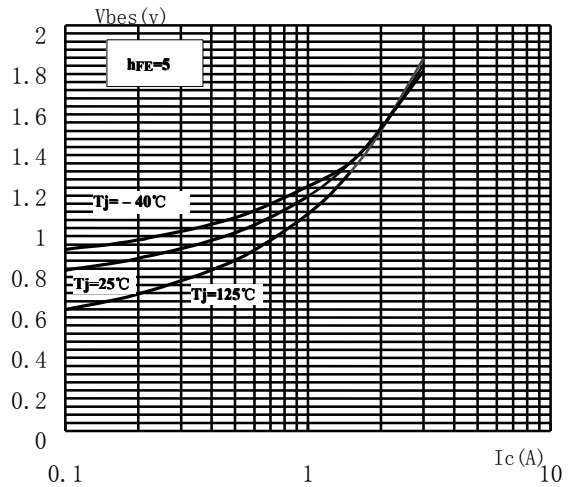
$h_{FE} - I_c$



$V_{cesat} - I_c$



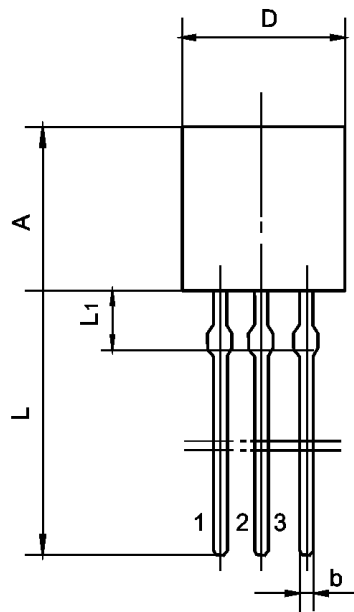
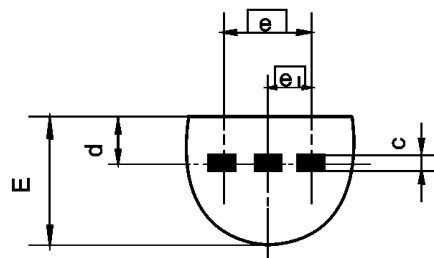
$V_{besat} - I_c$



## TO-92 封装机械尺寸 TO-92 MECHANICAL DATA

单位:毫米/UNIT: mm

| 符号/SYMBOL     | 最小值/min | 典型值/nom | 最大值/max |
|---------------|---------|---------|---------|
| A             | 4.30    |         | 5.30    |
| b             | 0.30    |         | 0.55    |
| c             | 0.30    |         | 0.50    |
| $\phi D$<br>D | 4.30    |         | 5.20    |
| d             | 1.00    |         | 1.70    |
| E             | 3.20    |         | 4.20    |
| e             |         | 2.54    |         |
| e1            |         | 1.27    |         |
| L             | 12.70   |         | 15.00   |
| L1            | 1.50    |         | 2.00    |



## TO-92S 封装机械尺寸 TO-92S MECHANICAL DATA

单位:毫米/UNIT: mm

| 符号/SYMBOL    | 最小值/min | 典型值/nom | 最大值/max |
|--------------|---------|---------|---------|
| A            | 4.30    |         | 5.30    |
| b            | 0.30    |         | 0.55    |
| c            | 0.30    |         | 0.50    |
| D( $\phi$ D) | 4.30    |         | 5.20    |
| d            | 1.00    |         | 1.70    |
| E            | 3.20    |         | 4.20    |
| F            | 2.25    | 2.40    | 2.55    |
| L            | 3.20    |         | 3.80    |
| L1           | 2.60    |         | 2.70    |

