

**描述 / Descriptions**

SOT-323 塑封封装 硅半导体二极管。Silicon Diode in a SOT-323 Plastic Package.

**特征 / Features**

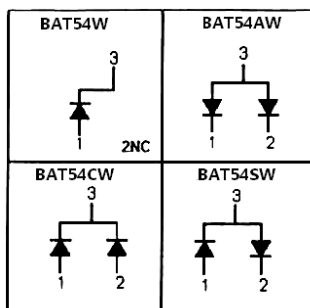
肖特基二极管。

Schottky diodes.

**用途 / Applications**

高导电率的超快速二极管。

High Conductance Ultra Fast Diode.

**内部等效电路 / Equivalent Circuit****引脚排列 / Pinning**

PIN: See Equivalent Circuit.

**印章代码 / Marking**

|         |        |         |         |         |
|---------|--------|---------|---------|---------|
| Model   | BAT54W | BAT54AW | BAT54CW | BAT54SW |
| Marking | HL4P   | HL42    | HL43    | HL44    |


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

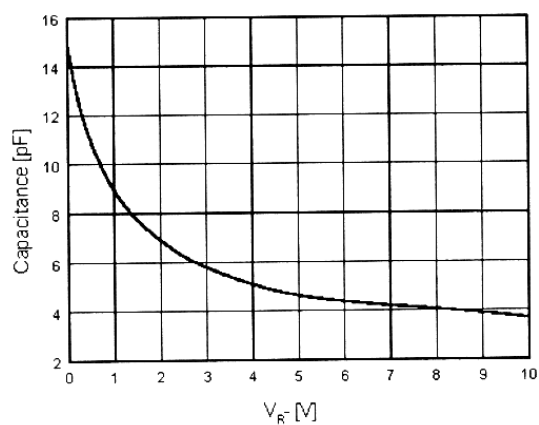
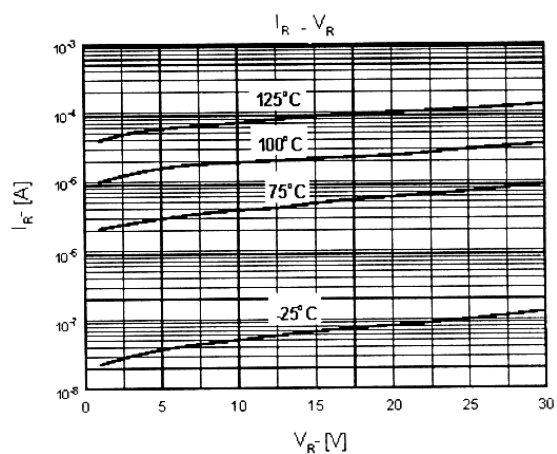
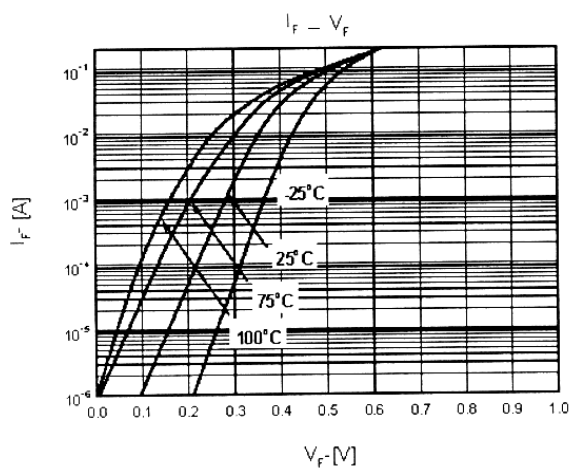
| 参数<br>Parameter                           | 符号<br>Symbol    | 数值<br>Rating | 单位<br>Unit |
|-------------------------------------------|-----------------|--------------|------------|
| Repetitive Reverse Voltage                | $V_{RRM}$       | 30           | V          |
| Average Rectified Forward Current         | $I_{F(AV)}$     | 300          | mA         |
| Non-repetitive Peak Forward Surge Current | $I_{FSM}$       | 1            | A          |
| Power Dissipation                         | $P_{tot}$       | 230          | mW         |
| Thermal Resistance, Junction to Ambient   | $R_{\theta JA}$ | 550          | °C/W       |
| Junction Temperature                      | $T_J$           | 150          | °C         |
| Storage Temperature Range                 | $T_{stg}$       | -55~150      | °C         |

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

| 参数<br>Parameter               | 符号<br>Symbol | 测试条件<br>Test Conditions                       | 最小值<br>Min | 典型值<br>Typ | 最大值<br>Max | 单位<br>Unit |
|-------------------------------|--------------|-----------------------------------------------|------------|------------|------------|------------|
| Breakdown Voltage             | $V_R$        | $I_R=10\mu A$                                 | 30         |            |            | V          |
| Forward Voltage               | $V_F$        | $I_F=0.1mA$                                   |            |            | 240        | mV         |
|                               |              | $I_F=1mA$                                     |            |            | 320        | mV         |
|                               |              | $I_F=10mA$                                    |            |            | 400        | mV         |
|                               |              | $I_F=30mA$                                    |            |            | 500        | mV         |
|                               |              | $I_F=100mA$                                   |            |            | 0.9        | V          |
| Instantaneous Reverse Current | $I_R$        | $V_R=30V$ $T_a=25^\circ C$                    |            |            | 1          | $\mu A$    |
| Total Capacitance             |              | $V_R=30V$ $T_a=100^\circ C$                   |            |            | 100        | $\mu A$    |
| Total Capacitance             | $C_T$        | $V_R=1V$ $f=1MHz$                             |            |            | 10         | pF         |
| Reverse Recovery Time         | $t_{rr}$     | $I_F=1R=10mA$ $I_{RR}=1mA$<br>$R_L=100\Omega$ |            |            | 5          | ns         |



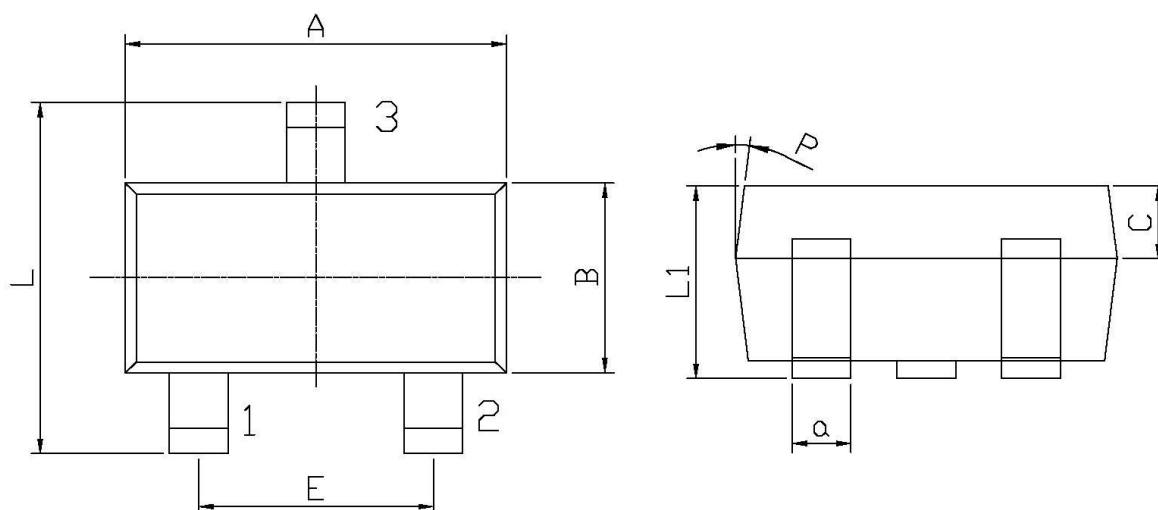
电参数曲线图 / Electrical Characteristic Curve



**外形尺寸图 / Package Dimensions**

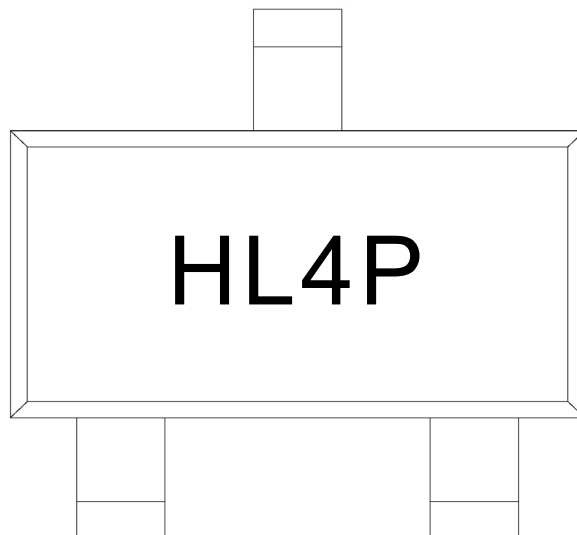
SOT-323

单位: mm



| Symbol | Dimensions In Millimeters |      | Symbol | Dimensions In Millimeters |      |
|--------|---------------------------|------|--------|---------------------------|------|
|        | Min                       | Max  |        | Min                       | Max  |
| A      | 1.95                      | 2.35 | C      | 0.30                      | 0.50 |
| L      | 2.00                      | 2.2  | L1     | 0.85                      | 1.15 |
| E      | 1.20                      | 1.40 | a      | 0.20                      | 0.40 |
| B      | 1.15                      | 1.35 | P      | 7°                        |      |

**印章说明 / Marking Instructions**



说明：

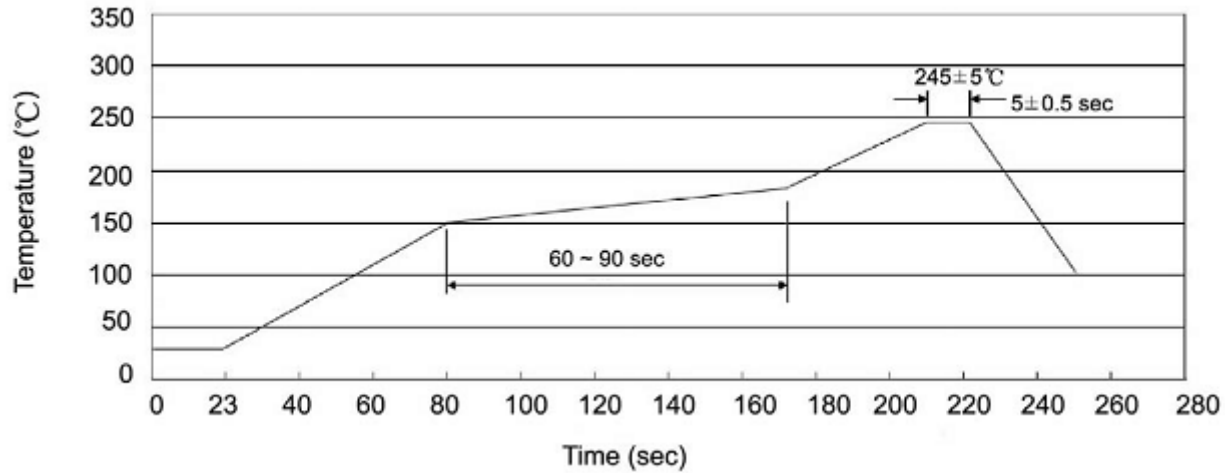
H： 为公司代码

L4P： 为型号代码

Note:

H: Company Code.

L4P: Product Type.

**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<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|-----------------------------------------|-------------|-------------|
|                      | Units/Reel<br>只/卷盘 | Reels/Inner Box<br>卷盘/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Reel                                    | Inner Box 盒 | Outer Box 箱 |
| SOT-323              | 3,000              | 10                      | 30,000                 | 6                            | 180,000                | 7" ×8                                   | 180×120×180 | 390×385×205 |

**使用说明 / Notices**