

## / Descriptions

Silicon PNP transistor in a TO-92LM Plastic Package.

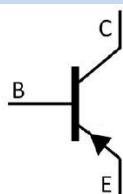
## / Features

$I_C$   $V_{CBO}$   
High Collector current, high Collector-base voltage.

## / Applications

Power dissipation.

## / Equivalent Circuit



## / Pinning



PIN1 Base      PIN 2 Collector      PIN 3 Emitter

## / $h_{FE}$ Classifications & Marking

| $h_{FE}$ Classifications<br>Symbol | R       | S       | T       | U       |
|------------------------------------|---------|---------|---------|---------|
| $h_{FE}$ Range                     | 100 200 | 140 280 | 200 400 | 280 560 |

/ Absolute Maximum Ratings( $T_a=25^\circ\text{C}$ )

| Parameter                    | Symbol    | Rating  | Unit |
|------------------------------|-----------|---------|------|
| Collector to Base Voltage    | $V_{CBO}$ | -110    | V    |
| Collector to Emitter Voltage | $V_{CEO}$ | -95     | V    |
| Emitter to Base Voltage      | $V_{EBO}$ | -7.0    | V    |
| Collector Current (DC)       | $I_C$     | -2.5    | A    |
| Collector Power Dissipation  | $P_C$     | 900     | mW   |
| Junction Temperature         | $T_j$     | 150     |      |
| Storage Temperature Range    | $T_{stg}$ | -55 150 |      |

/ Electrical Characteristics( $T_a=25^\circ\text{C}$ )

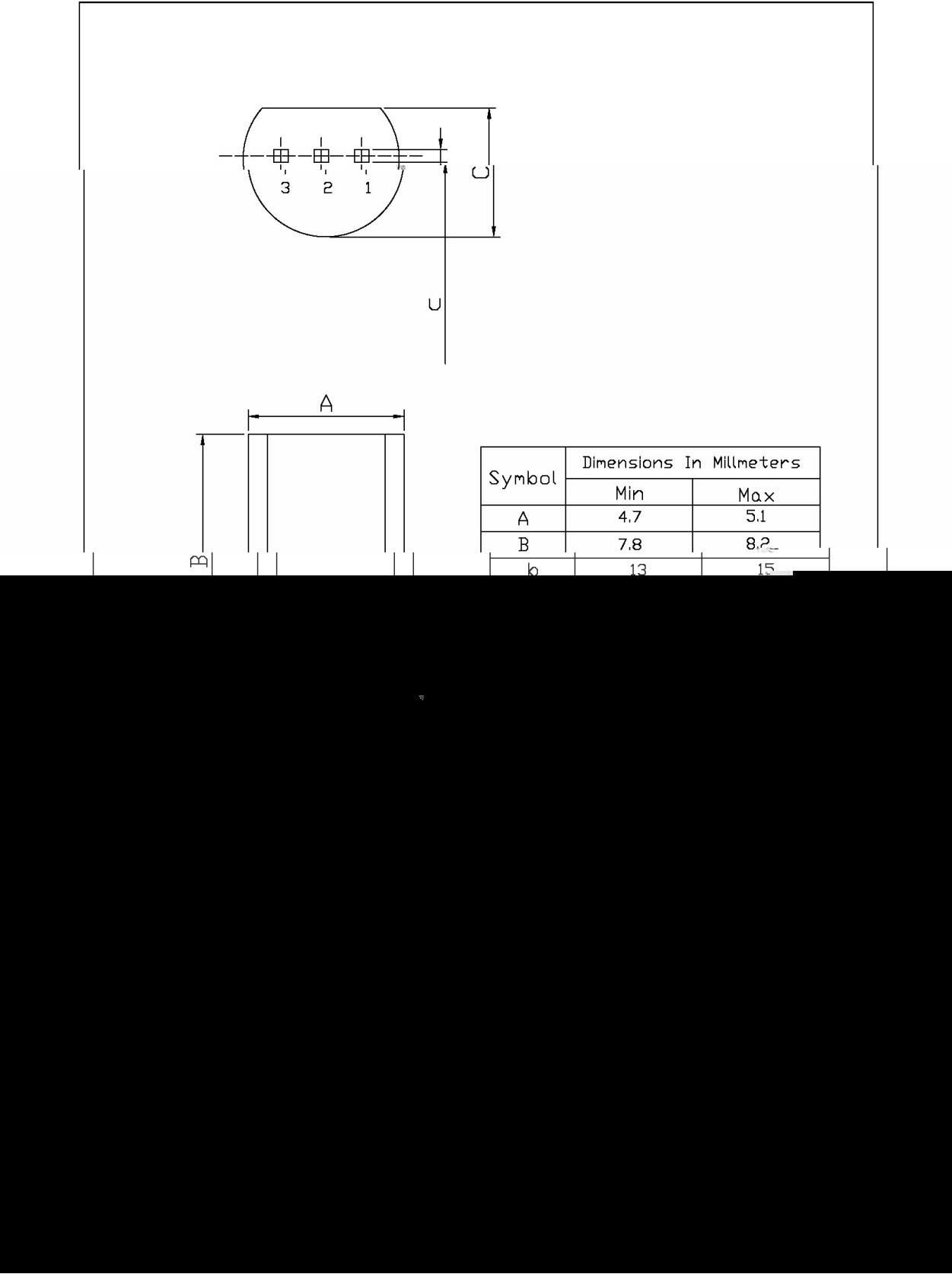
| Parameter                               | Symbol        | Test Conditions                                                | Min  | Typ | Max  | Unit |
|-----------------------------------------|---------------|----------------------------------------------------------------|------|-----|------|------|
| Collector to Base Breakdown Voltage     | $V_{CBO}$     | $I_C=-100\text{ A}$ $I_B=0$                                    | -110 |     |      | V    |
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$     | $I_C=-10\text{mA}$ $I_B=0$                                     | -95  |     |      | V    |
| Emitter to Base Breakdown Voltage       | $V_{EBO}$     | $I_E=-100\text{ A}$ $I_C=0$                                    | -7.0 |     |      | V    |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=-100\text{V}$ $I_E=0$                                  |      |     | -1.0 | A    |
| Emitter Cut-Off Current                 | $I_{EBO}$     | $V_{EB}=-5.0\text{V}$ $I_C=0$                                  |      |     | -1.0 | A    |
| DC Current Gain                         | $h_{FE(1)}$   | $V_{CE}=-2.0\text{V}$ $I_C=-100\text{mA}$                      | 100  |     | 560  |      |
|                                         | $h_{FE(2)}$   | $V_{CE}=-2.0\text{V}$ $I_C=-1.5\text{A}$                       | 40   |     |      |      |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-2.0\text{A}$ $I_B=-200\text{mA}$                         |      |     | -0.5 | V    |
| Base to Emitter Voltage                 | $V_{BE}$      | $V_{CE}=-5.0\text{V}$ $I_C=-500\text{mA}$                      |      |     | -1.0 | V    |
| Transition Frequency                    | $f_T$         | $V_{CE}=-1.0\text{V}$ $I_C=-250\text{mA}$<br>$f=1.0\text{MHz}$ | 3.0  |     |      | MHz  |

BD034L

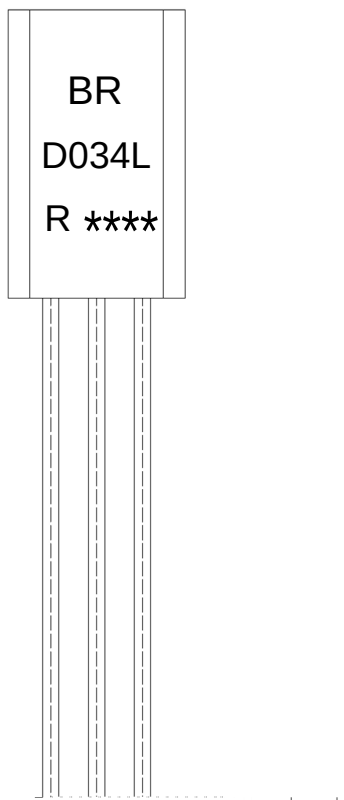
/ Package Dimensions

T0-92LM

Unit: mm



/ Marking Instructions



Note:

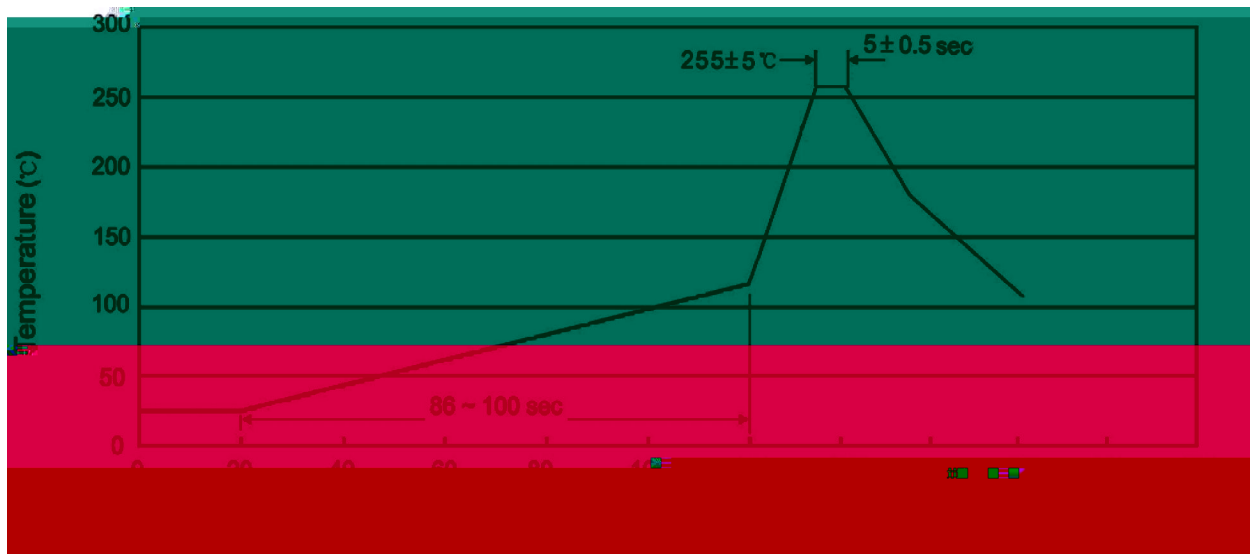
BR: Company Code.

D034L: Product Type.

R:  $h_{FE}$  Classifications Symbol

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

( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- |   |     |     |    |         |                                         |
|---|-----|-----|----|---------|-----------------------------------------|
| 1 | 25  | 150 | 60 | 90sec;  | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 255 | 5   | 5  | 0.5sec; | 2.Peak Temp.:255 5 , Duration:5 0.5sec. |
| 3 |     | 2   | 10 | /sec.   | 3. Cooling Speed: 2~10 /sec.            |

/ Resistance to Soldering Heat Test Conditions

270 5                      10 1 sec.                      Temp.:270±5                      Time:10±1 sec

/ Packaging SPEC.

/ BULK

| Package Type<br>封装形式 | Units 包装数量       |                       |                        |                              |                        | Dimension 包装尺寸 (unit: mm3) |             |             |
|----------------------|------------------|-----------------------|------------------------|------------------------------|------------------------|----------------------------|-------------|-------------|
|                      | Units/Bag<br>只/袋 | Bags/Inner Box<br>袋/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Bag 袋                      | Inner Box 盒 | Outer Box 箱 |
| TO-92LM              | 1,000            | 8                     | 8,000                  | 5                            | 40,000                 | 135×190                    | 237×172×102 | 560×245×195 |

/ AMMO

| Package Type<br>封装形式 | Units 包装数量         |                        |                         |                              |                        | Dimension 包装尺寸 (unit: mm3) |                                  |
|----------------------|--------------------|------------------------|-------------------------|------------------------------|------------------------|----------------------------|----------------------------------|
|                      | Units/tape<br>只/纸带 | Tape/Inner Box<br>纸带/盒 | Rows/Inner Box<br>纸带层/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Inner Box 盒                | Outer Box 箱                      |
| TO-92LM              | 2,500              | 1                      | 100                     | 10                           | 25,000                 | 328×230×42                 | 小箱 480×346×235<br>大箱 547×407×268 |

/ Notices