

### / Descriptions

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

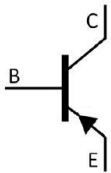
### / Features

， KSC2331  
High Collector-Base voltage, complementary pair with KSC2331.

### / Applications

，  
Low frequency amplifier, medium speed switching.

### / Equivalent Circuit



### / Pinning



PIN1   Base          PIN 2   Collector          PIN 3   Emitter

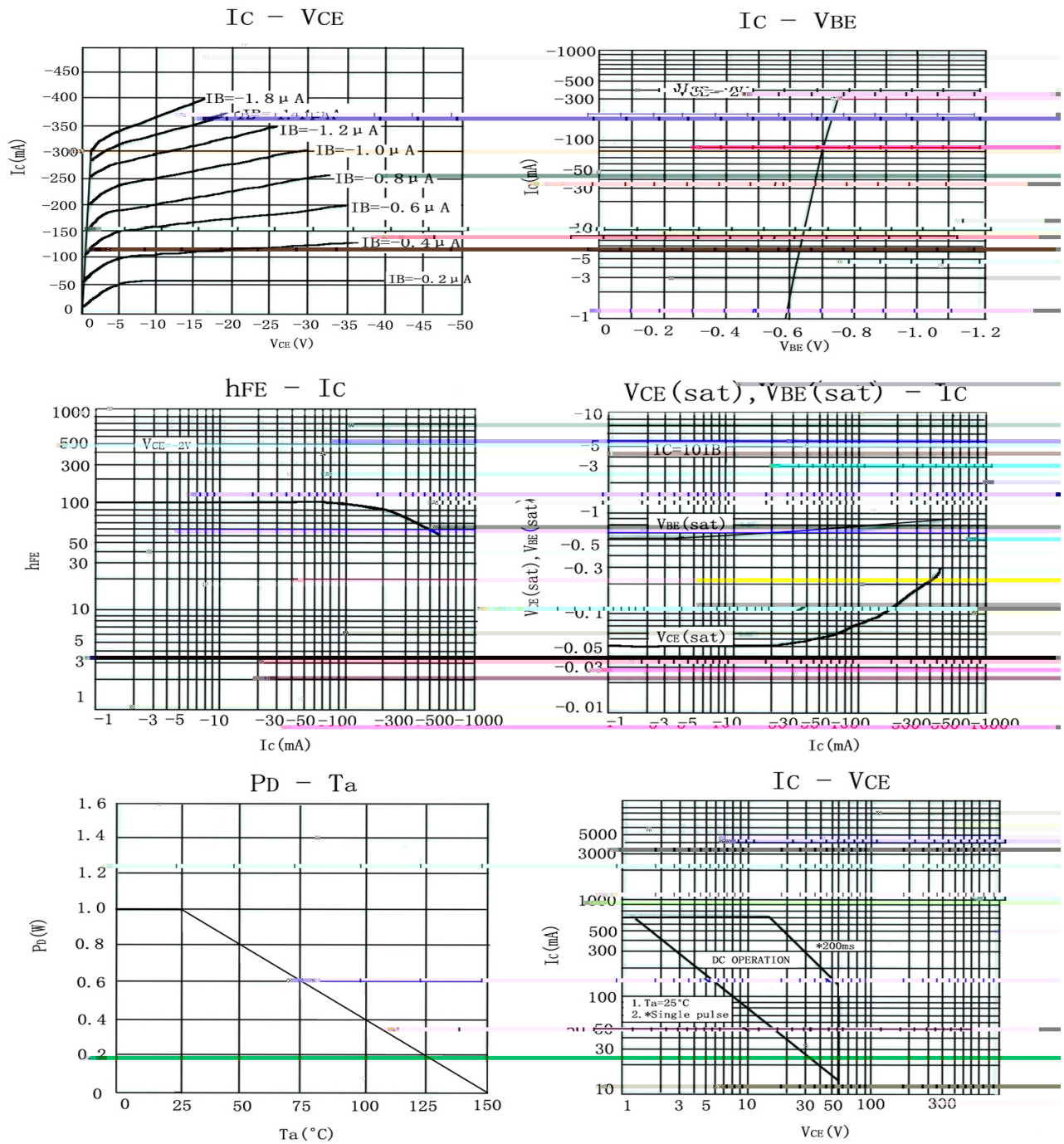
### / $h_{FE}$ Classifications & Marking

|                                    |       |        |         |
|------------------------------------|-------|--------|---------|
| $h_{FE}$ Classifications<br>Symbol | R     | O      | Y       |
| $h_{FE}$ Range                     | 40~80 | 70~140 | 120~240 |

| Parameter                      | Symbol    | Rating  | Unit |
|--------------------------------|-----------|---------|------|
| Collector to Base Voltage      | $V_{CBO}$ | -80     | V    |
| Collector to Emitter Voltage   | $V_{CEO}$ | -60     | V    |
| Emitter to Base Voltage        | $V_{EBO}$ | -8.0    | V    |
| Collector Current - Continuous | $I_C$     | -700    | mA   |
| Collector Power Dissipation    | $P_C$     | 1.0     | W    |
| Junction Temperature           | $T_j$     | 150     |      |
| Storage Temperature Range      | $T_{stg}$ | -55 150 |      |

| Parameter                                                      | Symbol    | Test Conditions             | Min  | Typ | Max  | Unit           |
|----------------------------------------------------------------|-----------|-----------------------------|------|-----|------|----------------|
| Collector to Base Breakdown Voltage                            | $V_{CBO}$ | $I_C = -100\mu A$ $I_E = 0$ | -80  |     |      | V              |
| Collector to Emitter Breakdown Voltage                         | $V_{CEO}$ | $I_C = -10mA$ $I_B = 0$     | -60  |     |      | V              |
| Emitter to Base Breakdown Voltage                              | $V_{EBO}$ | $I_E = -100\mu A$ $I_C = 0$ | -8.0 |     |      | V              |
| Collector Cut-Off Current <span style="float: right;">E</span> | $I_{CBO}$ | $V_{CB} = -60V$ $I_E = 0$   |      | I   | -0.1 | $\mu A$ Collec |

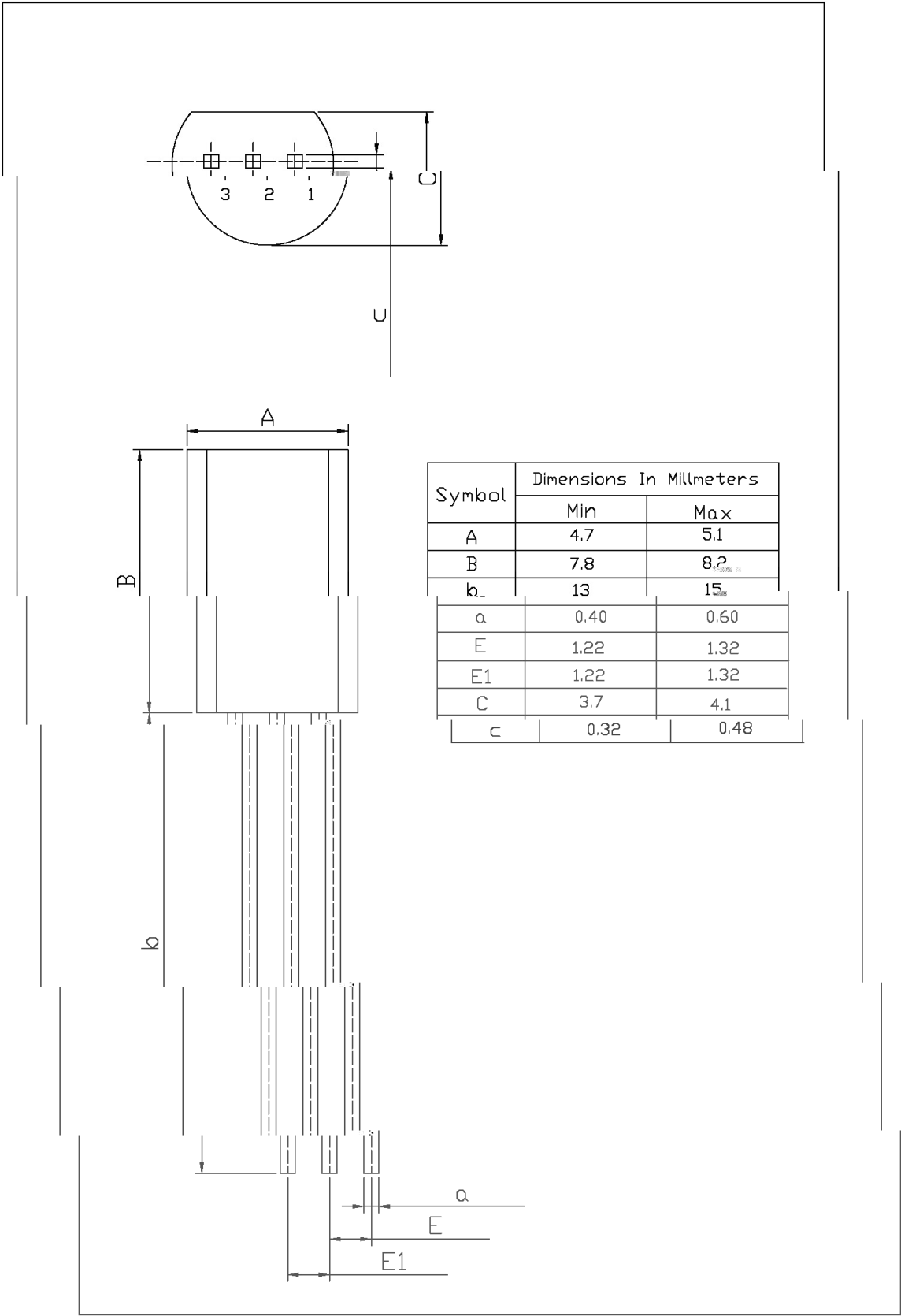
**/ Electrical Characteristic Curve**



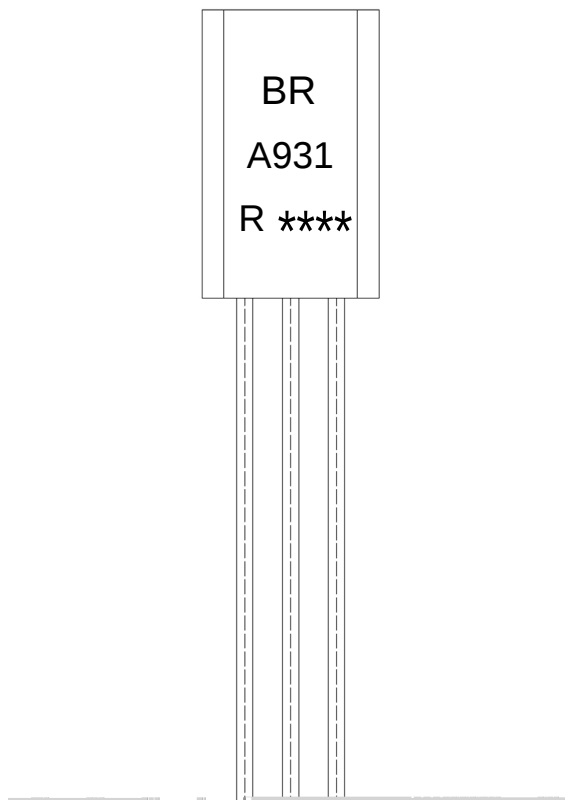
/ Package Dimensions

T0-92LM

Unit: mm



/ Marking Instructions



BR:

A931

R:  $h_{FE}$

\*\*\*\*

Note:

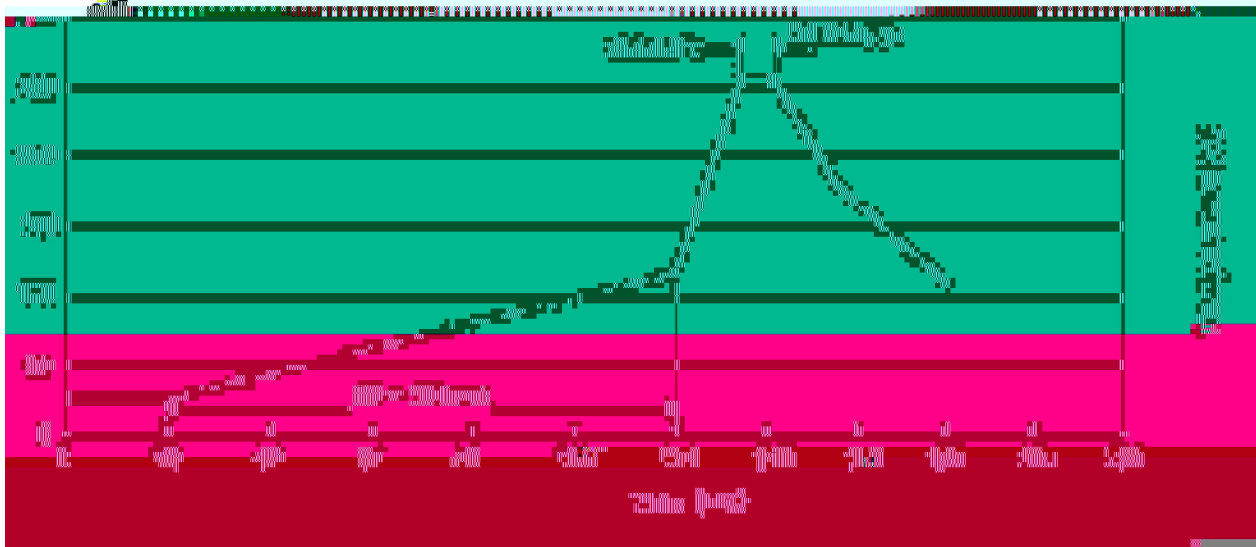
BR: Company Code.

A931: 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                  |                                      |