

**/ Descriptions**

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

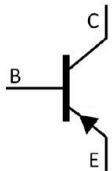
**/ Features**

2SC2235

Complementary pair with 2SC2235.

**/ Applications**

Power amplifier applications, driver stage amplifier applications.

**/ Equivalent Circuit****/ Pinning**

PIN1   Base          PIN 2   Collector          PIN 3   Emitter

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

|                                    |        |         |
|------------------------------------|--------|---------|
| $h_{FE}$ Classifications<br>Symbol | O      | Y       |
| $h_{FE}$ Range                     | 80~160 | 120~240 |

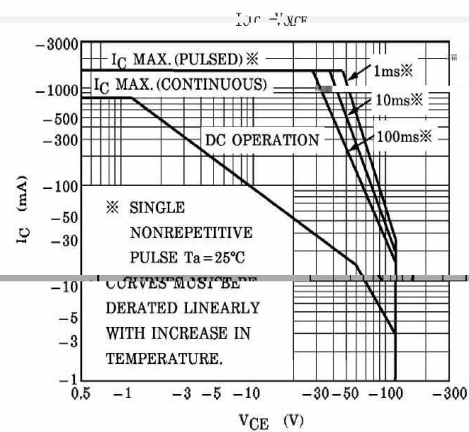
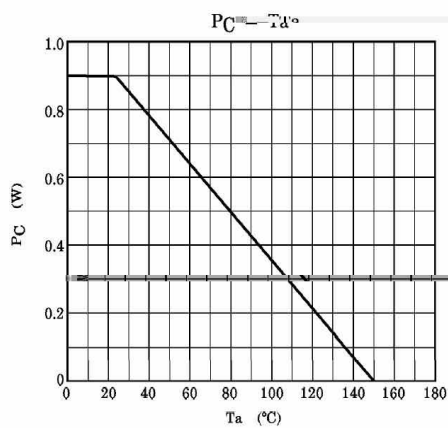
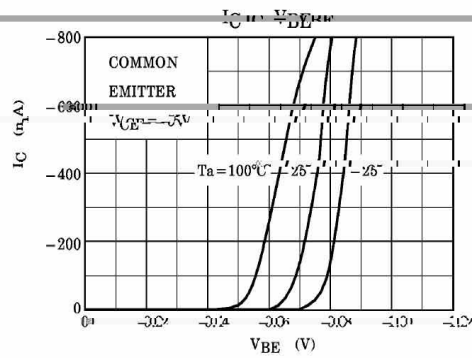
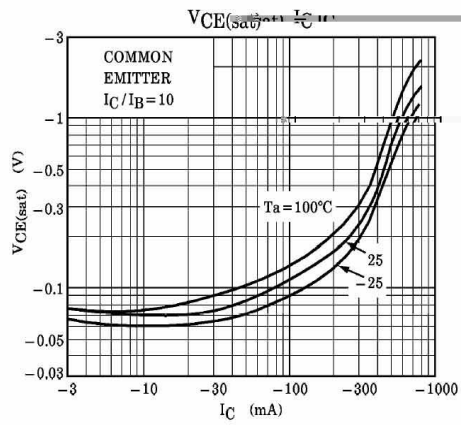
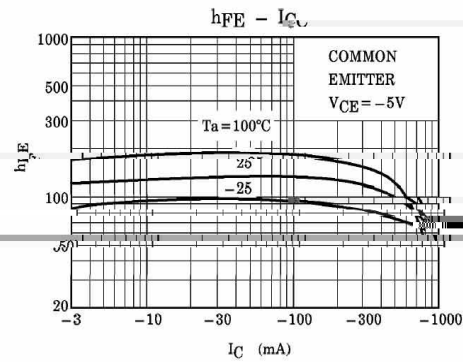
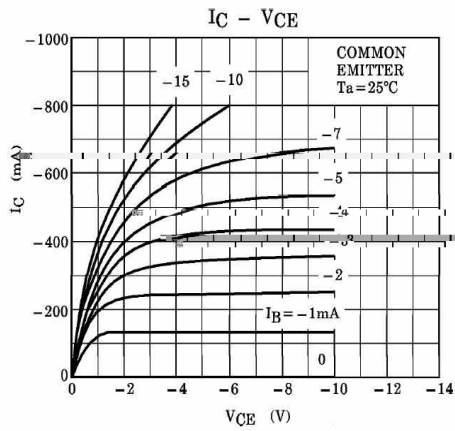
**/ Absolute Maximum Ratings(Ta=25 )**

| Parameter                      | Symbol    | Rating  | Unit |
|--------------------------------|-----------|---------|------|
| Collector to Base Voltage      | $V_{CBO}$ | -120    | V    |
| Collector to Emitter Voltage   | $V_{CEO}$ | -120    | V    |
| Emitter to Base Voltage        | $V_{EBO}$ | -5.0    | V    |
| Collector Current - Continuous | $I_C$     | -800    | mA   |
| Emitter Current - Continuous   | $I_E$     | 800     | mA   |
| Collector Power Dissipation    | $P_C$     | 900     | mW   |
| Junction Temperature           | $T_J$     | 150     |      |
| Storage Temperature Range      | $T_{stg}$ | -55 150 |      |

**/ Electrical Characteristics(Ta=25 )**

| Parameter                               | Symbol        | Test Conditions                     | Min  | Typ | Max  | Unit |
|-----------------------------------------|---------------|-------------------------------------|------|-----|------|------|
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$     | $I_C=-10mA$ $I_B=0$                 | -120 |     |      | V    |
| Emitter to Base Breakdown Voltage       | $V_{EBO}$     | $I_E=-1.0mA$ $I_C=0$                | -5.0 |     |      | V    |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=-120V$ $I_E=0$              |      |     | -0.1 | A    |
| Emitter Cut-Off Current                 | $I_{EBO}$     | $V_{EB}=-5.0V$ $I_C=0$              |      |     | -0.1 | A    |
| DC Current Gain                         | $h_{FE}$      | $V_{CE}=-5.0V$ $I_C=-100mA$         | 80   |     | 240  |      |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-500mA$ $I_B=-50mA$            |      |     | -1.0 | V    |
| Base to Emitter Voltage                 | $V_{BE}$      | $V_{CE}=-5.0V$ $I_C=-500mA$         |      |     | -1.0 | V    |
| Transition Frequency                    | $f_T$         | $V_{CE}=-5.0V$ $I_C=-100mA$         |      | 120 |      | MHz  |
| Collector output capacitance            | $C_{ob}$      | $V_{CB}=-10V$ $I_E=0$<br>$f=1.0MHz$ |      |     | 40   | pF   |

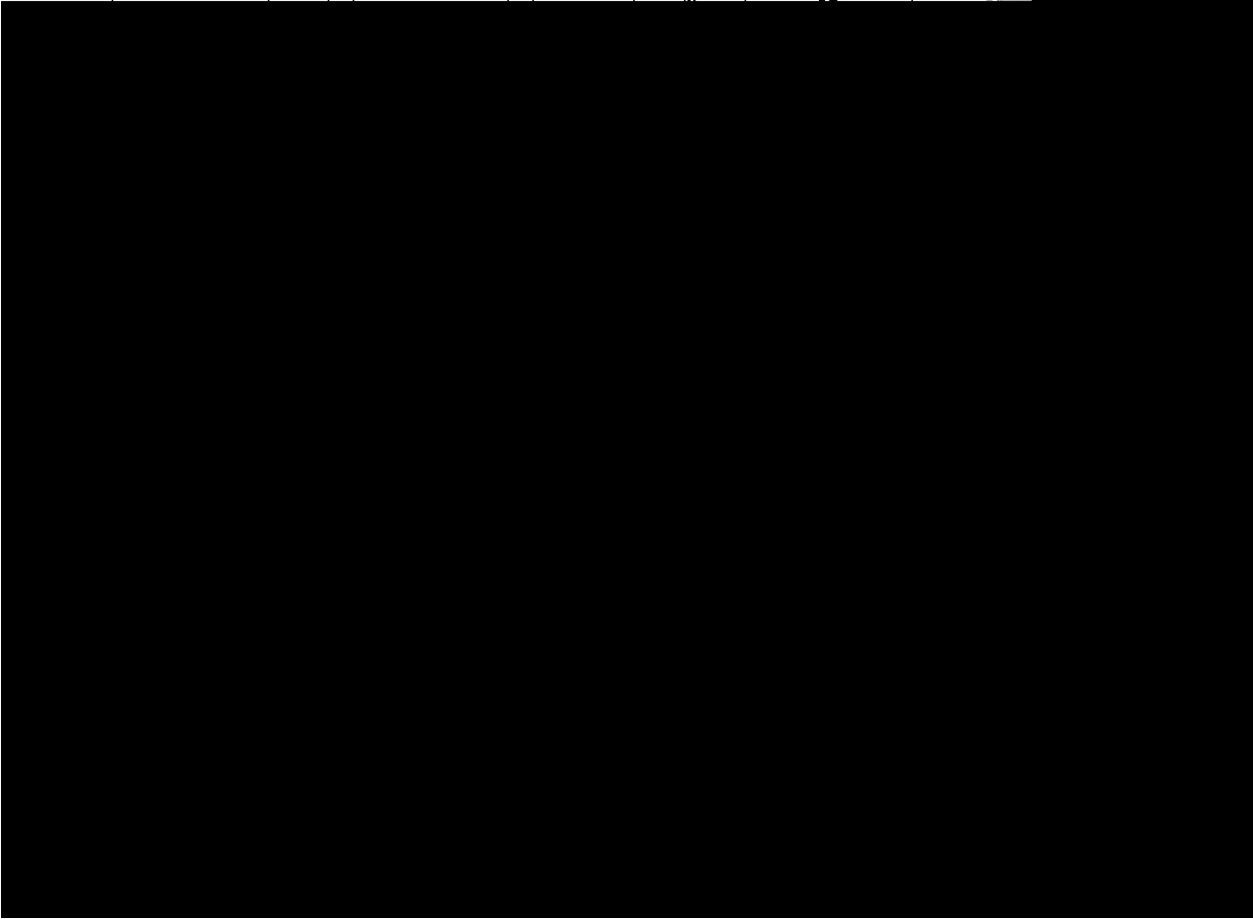
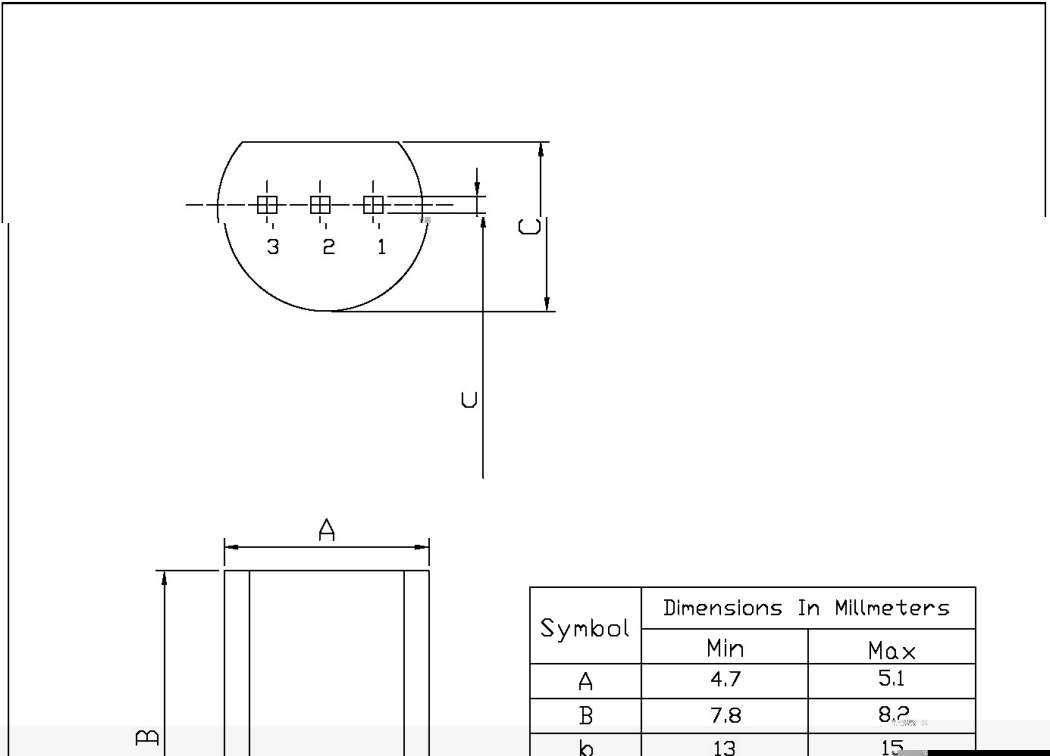
**/ Electrical Characteristic Curve**



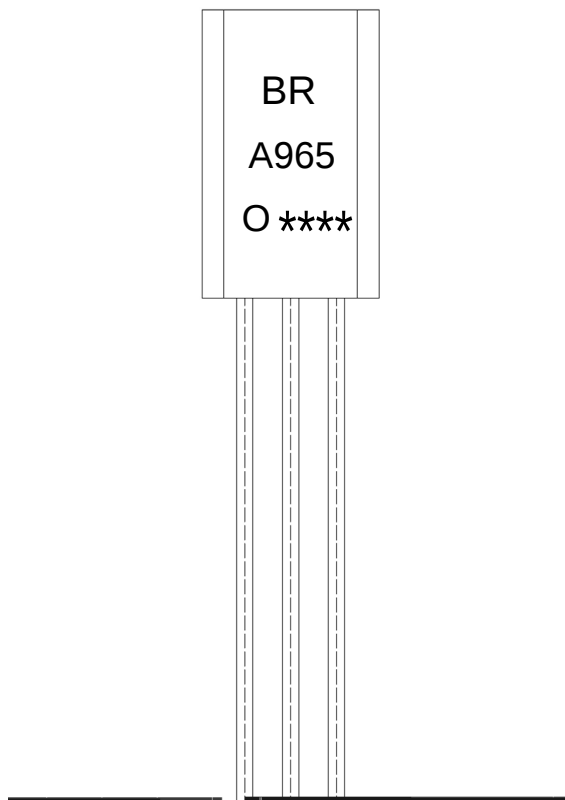
/ Package Dimensions

T0-92LM

Unit: mm



/ Marking Instructions



BR:

A965

O:  $h_{FE}$

\*\*\*\*

Note:

BR: Company Code.

A965: Product Type.

O:  $h_{FE}$  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 |