

## Descriptions

This is Silicon NPN transistor in a TO-92LM Plastic Package.

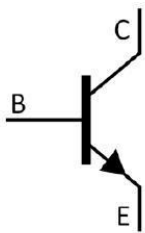
## Features

- Low saturation voltage
- High speed switching time
- Complementary to 2SA1020.

## Applications

Power amplifier and switching applications.

## Equivalent Circuit & Pinning



PIN1: Base

PIN 2: Collector

PIN 3: Emitter

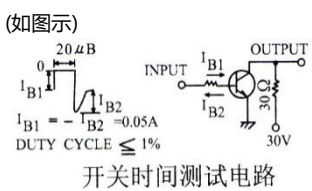
## hFE Classifications & Marking

| h <sub>FE</sub> Classifications Symbol | O      | Y       | G       |
|--|--------|---------|---------|
| h <sub>FE</sub> Range                  | 70~140 | 120~240 | 200-400 |

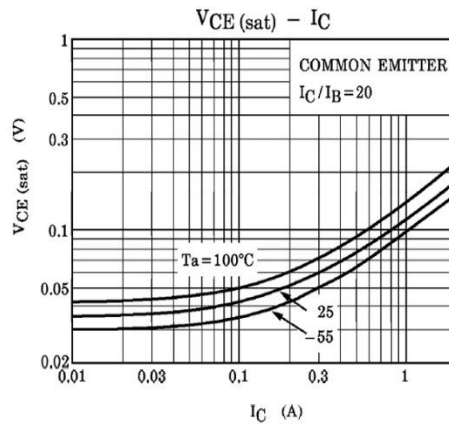
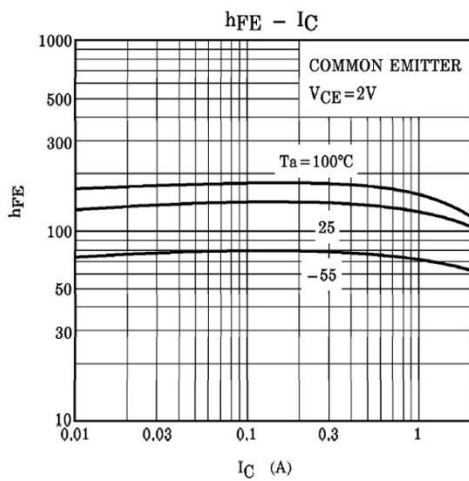
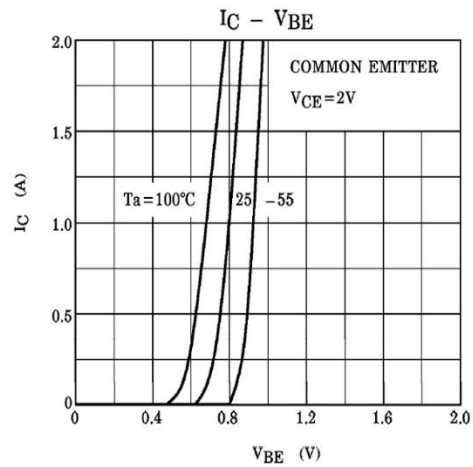
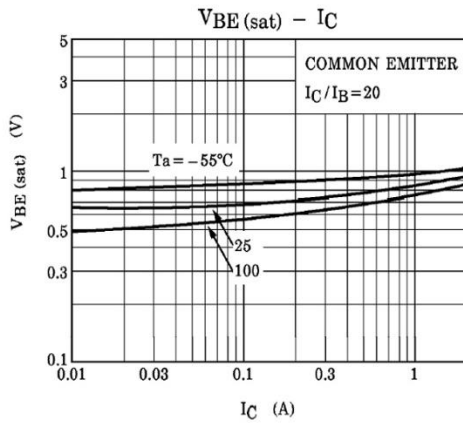
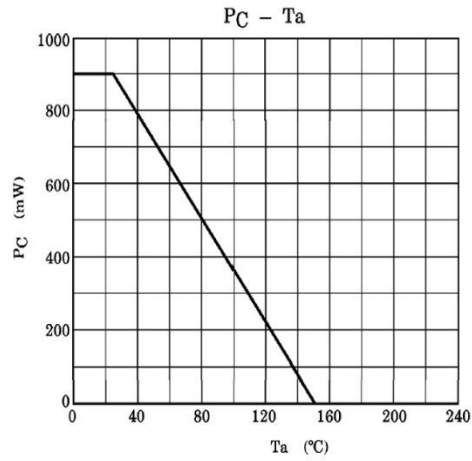
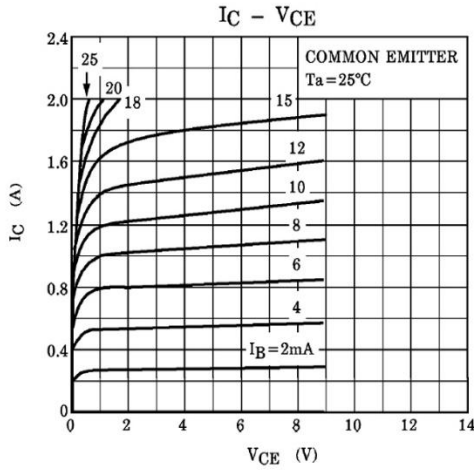
Absolute Maximum Ratings(Ta=25°C)

| Parameter                    | Symbol    | Rating  | Unit |
|------------------------------|-----------|---------|------|
| Collector to Base Voltage    | $V_{CBO}$ | 50      | V    |
| Collector to Emitter Voltage | $V_{CEO}$ | 50      | V    |
| Emitter to Base Voltage      | $V_{EBO}$ | 5.0     | V    |
| Collector Current (DC)       | $I_C$     | 2.0     | A    |
| Collector Power Dissipation  | $P_C$     | 900     | mW   |
| Junction Temperature         | $T_j$     | 150     | °C   |
| Storage Temperature Range    | $T_{stg}$ | -55~150 | °C   |

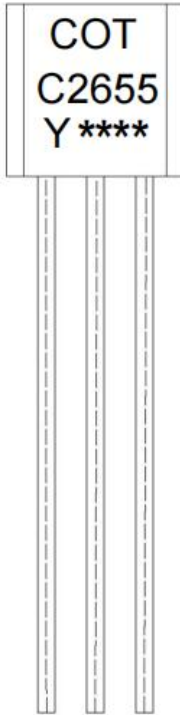
Electrical Characteristics(Ta=25°C)

| Parameter                               | Symbol        | Test Conditions  | Min | Typ | Max | Unit    |         |
|---|---------------|--|-----|-----|-----|---------|---------|
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$     | $I_C=10mA$ $I_B=0$   | 50  |     |     | V       |         |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=50V$ $I_E=0$   |     |     | 1.0 | $\mu A$ |         |
| Emitter Cut-Off Current                 | $I_{EBO}$     | $V_{EB}=5.0V$ $I_C=0$  |     |     | 1.0 | $\mu A$ |         |
| DC Current Gain                         | $h_{FE(1)}$   | $V_{CE}=2.0V$ $I_C=0.5A$   | 70  |     | 400 |         |         |
|   | $h_{FE(2)}$   | $V_{CE}=2.0V$ $I_C=1.5A$   | 40  |     |     |         |         |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=1.0A$ $I_B=0.05A$   |     |     | 0.5 | V       |         |
| Base to Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=1.0A$ $I_B=0.05A$   |     |     | 1.2 | V       |         |
| Transition Frequency                    | $f_T$         | $V_{CE}=2.0V$ $I_C=0.5A$   | 50  | 100 |     | MHz     |         |
| Collector output capacitance            | $C_{ob}$      | $V_{CB}=10V$ $f=1.0MHz$ $I_E=0$  |     | 30  | 45  | pF      |         |
| Turn-On Time                            | $t_{on}$      | (如图示)<br><br>$I_{B1} = -I_{B2} = 0.05A$<br>DUTY CYCLE $\leq 1\%$<br>开关时间测试电路 |     | 0.1 |     | $\mu s$ |         |
| Turn-Off Time                           | $t_f$         |  |     |     | 0.1 |         | $\mu s$ |
| Storage Time                            | $t_{stg}$     |  |     |     | 1.0 |         | $\mu s$ |

Electrical Characteristic Curve



**Marking Instructions**



- Note:
- COT: Company Code.
  - C2655: Product Type.
  - Y: hFE Classifications Symbol.
  - \*\*\*\*: Lot No. Code, code change with Lot No

| hFE Classifications Symbol | O      | Y       | G       |
|----------------------------|--------|---------|---------|
| hFE Range                  | 70~140 | 120~240 | 200-400 |

**Packaging SPEC**

**BULK**

| Package Type | Units     |                |                 |                       |                 | Dimension (unit: mm3) |             |             |
|--------------|-----------|----------------|-----------------|-----------------------|-----------------|-----------------------|-------------|-------------|
|              | Units/Bag | Bags/Inner Box | Units/Inner Box | Inner Boxes/Outer Box | Units/Outer Box | Bag                   | Inner Box   | Outer Box   |
| TO-92LM      | 1,000     | 8              | 8,000           | 5                     | 40,000          | 135×190               | 237×172×102 | 560×245×195 |

**AMMO**

| Package Type | Units      |                |                |                       |                 | Dimension (unit: mm3) |                                |
|--------------|------------|----------------|----------------|-----------------------|-----------------|-----------------------|--------------------------------|
|              | Units/tape | Tape/Inner Box | Rows/Inner Box | Inner Boxes/Outer Box | Units/Outer Box | Inner Box             | Outer Box                      |
| TO-92LM      | 2,500      | 1              | 100            | 10                    | 25,000          | 328×230×42            | 小箱480×346×235<br>大箱547×407×268 |

**Package Outline Dimensions**

TO-92LM

Unit: mm

