

**/ Descriptions**

SOT-89          PNP          Silicon PNP transistor in a SOT-89 Plastic Package.

**/ Features**

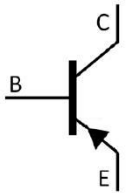
2SC2873

Low collector saturation voltage, High speed switching time, small flat package, Complementary to 2SC2873.

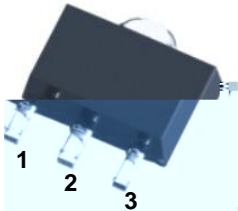
**/ Applications**

Power amplifier and switching applications.

**/ Equivalent Circuit**



**/ Pinning**



PIN1 Base          PIN 2 Collector          PIN 3 Emitter

**/ Marking**

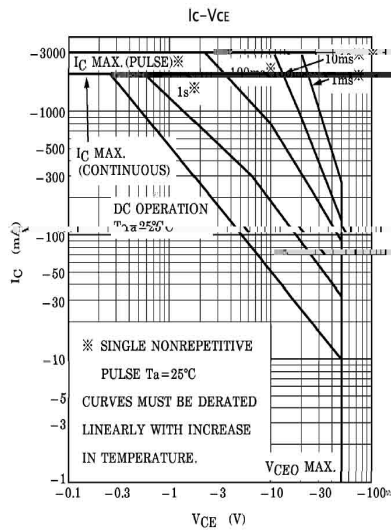
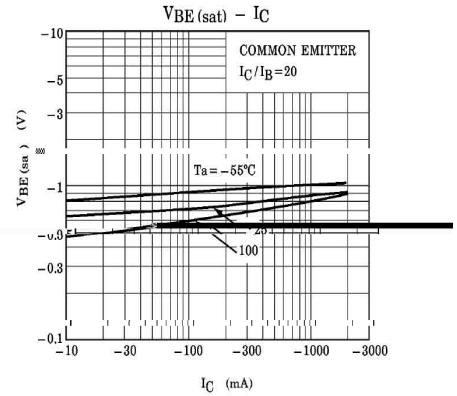
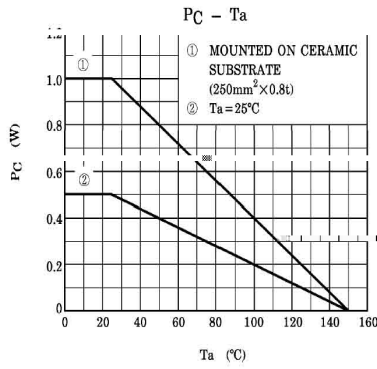
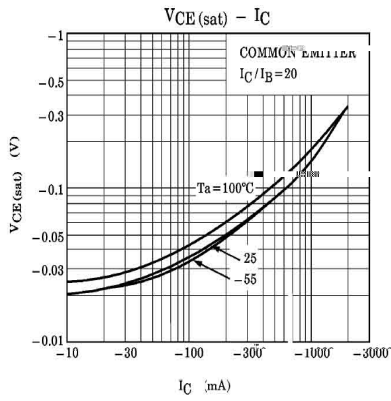
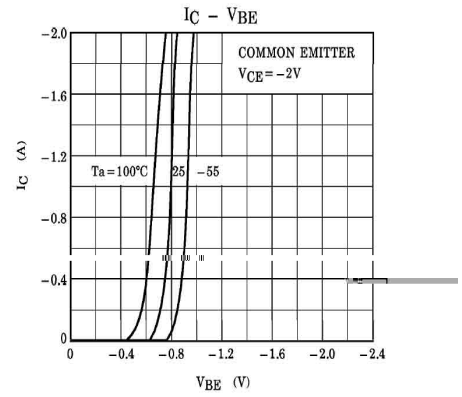
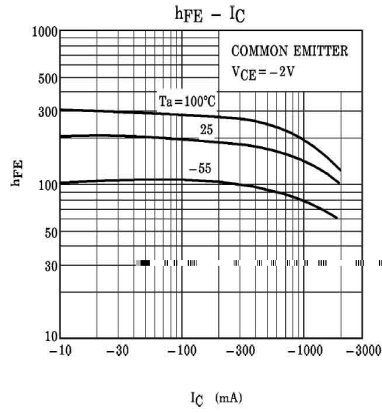
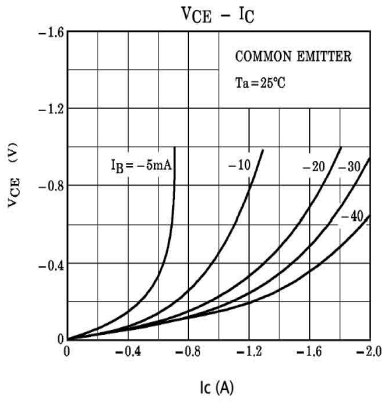
|                                 |            |            |
|---------------------------------|------------|------------|
| $h_{FE}$ Classifications Symbol | O          | Y          |
| $h_{FE}$ Range                  | 70~140     | 120~240    |
| Marking                         | HNO *<br>* | HNY *<br>* |

| 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-Continuous | $I_C$                         | -2.0    | A    |
| Collector Base-Continuous    | $I_B$                         | -0.4    | A    |
| Collector Power Dissipation  | $P_C$                         | 500     | mW   |
| Collector Power Dissipation* | * $P_C(T_a=25^\circ\text{C})$ | 1000    | mW   |
| Junction Temperature         | $T_j$                         | 150     |      |
| Storage Temperature Range    | $T_{stg}$                     | -55~150 |      |

\*BR2SA1213 mounted on ceramic substrate(250mm<sup>2</sup>×0.8t).

| Parameter                               | Symbol        | Test Conditions                         | Min | Typ | Max  | Unit    |
|---|---------------|---|-----|-----|------|---------|
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=-50V$ $I_E=0$                   |     |     | -0.1 | $\mu A$ |
| Emitter Base Cut-Off Current            | $I_{EBO}$     | $V_{EB}=-5.0V$ $I_C=0$                  |     |     | -0.1 | $\mu A$ |
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$     | $I_C=-10mA$ $I_B=0$                     | -50 |     |      | V       |
| DC Current Gain                         | $h_{FE(1)}$   | $V_{CE}=-2.0V$ $I_C=-500mA$             | 70  |     | 240  |         |
|   | $h_{FE(2)}$   | $V_{CE}=-2.0V$ $I_C=-2.0A$              | 20  |     |      |         |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-1.0A$ $I_B=-0.05A$                |     |     | -0.5 | V       |
| Collector to Base Saturation Voltage    | $V_{BE(sat)}$ | $I_C=-1.0A$ $I_B=-0.05A$                |     |     | -1.2 | V       |
| Transition Frequency                    | $f_T$         | $V_{CE}=-2.0V$ $I_C=-500mA$             |     | 120 |      | MHz     |
| Collector Output Capacitance            | $C_{ob}$      | $V_{CB}=-10V$ $I_E=0$<br>$f=1MHz$       |     | 40  |      | pF      |
| Turu-On Time                            | $t_{on}$      | $-I_{B1}=I_{B2}=0.05A$<br>$V_{CC}=-30V$ |     | 0.1 |      | $\mu S$ |
| Storage Time                            | $t_{stg}$     |   |     | 1.0 |      |         |
| Fall Time                               | $t_f$         |   |     | 0.1 |      |         |

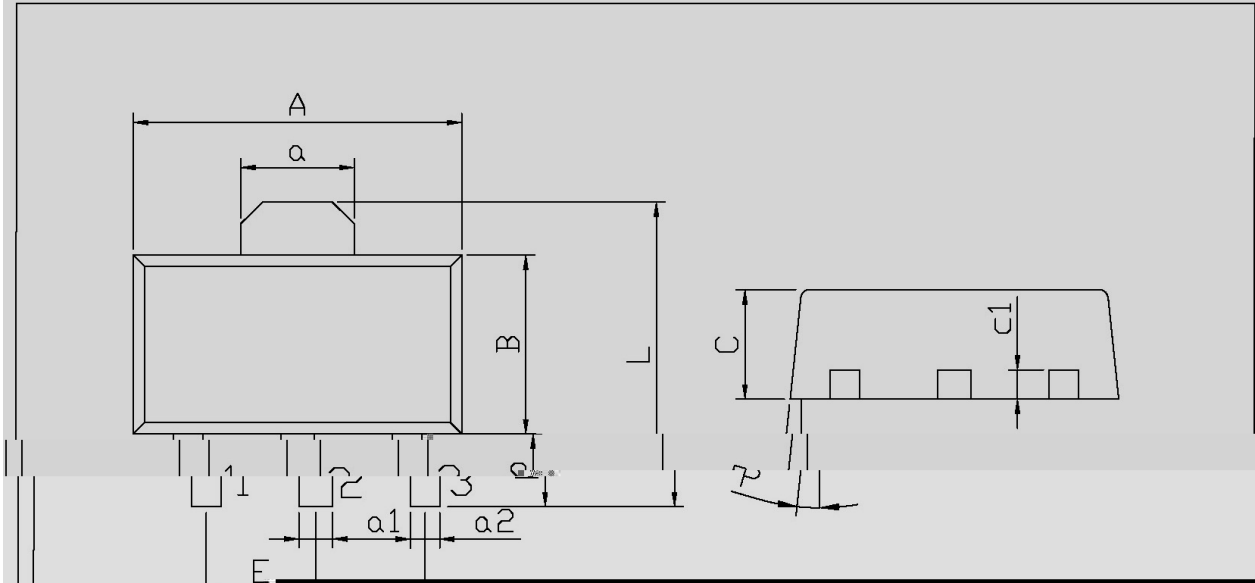
/ Electrical Characteristic Curve



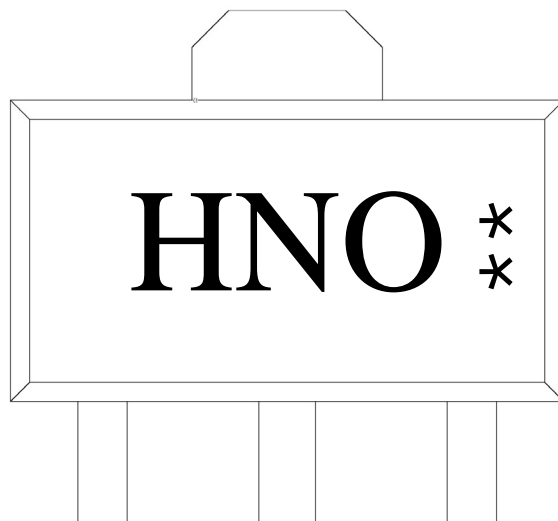
/ Package Dimensions

SOT-89

单位: mm



/ Marking Instructions



H

N

O

$h_{FE}$

\*\*

Note:

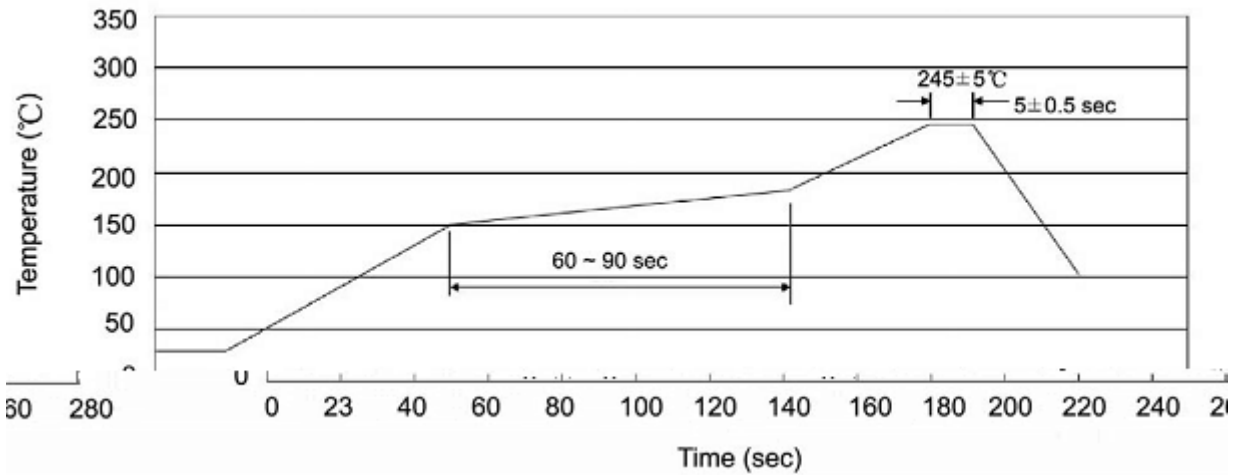
H: Company Code.

N: Product Type.

O:  $h_{FE}$  Classifications Symbol

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

( ) / K\d g\iXk i\`Gif]`d`]fi`@`I`]\fn`Jfd` \i`e`^ZGS=i\`z



Note:

- |   |       |     |    |           |   |
|---|-------|-----|----|-----------|---|
| 1 | 25    | 150 | 60 | 90sec;    | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 245±5 |     |    | 5±0.5sec; | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 |       |     | 2  | 10 /sec.  | 3. Cooling Speed: 2~10 /sec.            |

/ Resistance to Soldering Heat Test Conditions

260±5                      10±1 sec.                      Temp.:260±5                      Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type                      Units