

### / Descriptions

SOT-23

NPN

Silicon NPN transistor in a SOT-23 Plastic Package.

### / Features

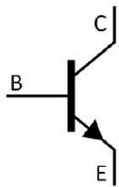
BCW68

Complementary to BCW68.

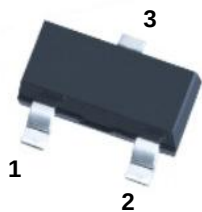
### / Applications

Medium power amplifier applications.

### / Equivalent Circuit



### / Pinning



PIN1 Base      PIN 2 Emitter      PIN 3 Collector

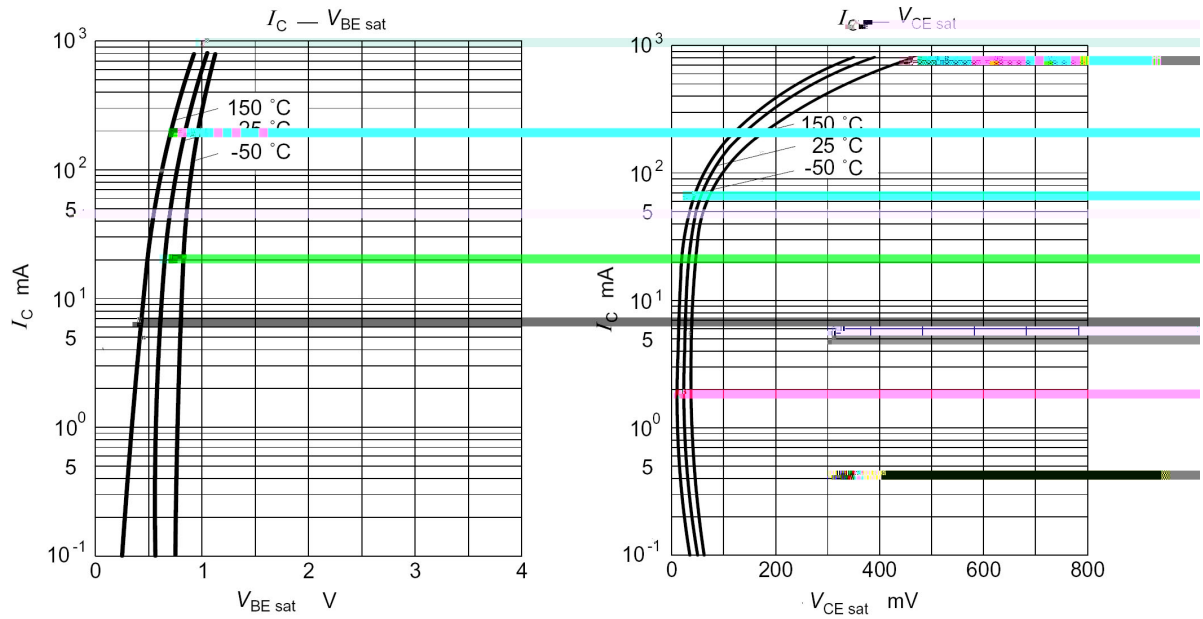
### / $h_{FE}$ Classifications & Marking

| $h_{FE}$ Classifications<br>Symbol | F       | G       | H       |
|------------------------------------|---------|---------|---------|
| $h_{FE}$ Range                     | 100 250 | 160 400 | 250 630 |
| Marking                            | HDAO    | HDAY    | HDAG    |

| Parameter                    | Symbol    | Rating  | Unit |
|------------------------------|-----------|---------|------|
| Collector to Base Voltage    | $V_{CBO}$ | 75      | V    |
| Collector to Emitter Voltage | $V_{CEO}$ | 45      | V    |
| Emitter to Base Voltage      | $V_{EBO}$ | 5.0     | V    |
| Collector Current(DC)        | $I_C$     | 800     | mA   |
| Peak Collector Current       | $I_{CM}$  | 1.0     | A    |
| Peak Base Current            | $I_B$     | 100     | mA   |
| Collector Power Dissipation  | $P_C$     | 330     | mW   |
| Junction Temperature         | $T_j$     | 150     |      |
| Storage Temperature Range    | $T_{stg}$ | -55 150 |      |

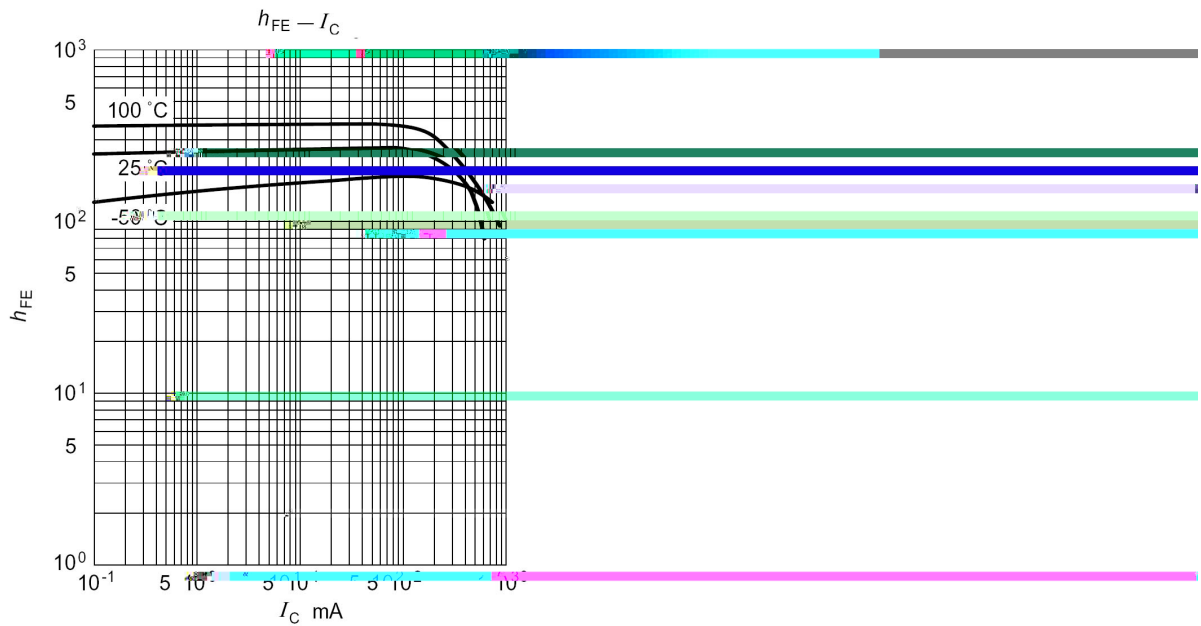
|                                         |                  |               |             |     |  |     |   |
|-----------------------------------------|------------------|---------------|-------------|-----|--|-----|---|
| DC Current Gain                         | $h_{FE(1)}$      | $V_{CE}=1.0V$ | $I_C=100mA$ | 100 |  | 630 |   |
|                                         | $h_{FE(2)}$      | $V_{CE}=1.0V$ | $I_C=10mA$  | 75  |  |     |   |
|                                         | $h_{FE(3)}$      | $V_{CE}=2.0V$ | $I_C=500mA$ | 35  |  |     |   |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)(1)}$ | $I_C=100mA$   | $I_B=10mA$  |     |  | 0.3 | V |
|                                         | $V_{CE(sat)(2)}$ | $I_C=500mA$   | $I_B=50mA$  |     |  | 0.7 | V |
| Base to Emitter Saturation Voltage      | $V_{BE(sat)}$    | $I_C=500mA$   | $I_B=50mA$  |     |  | 2.0 | V |

## I Electrical Characteristic Curve

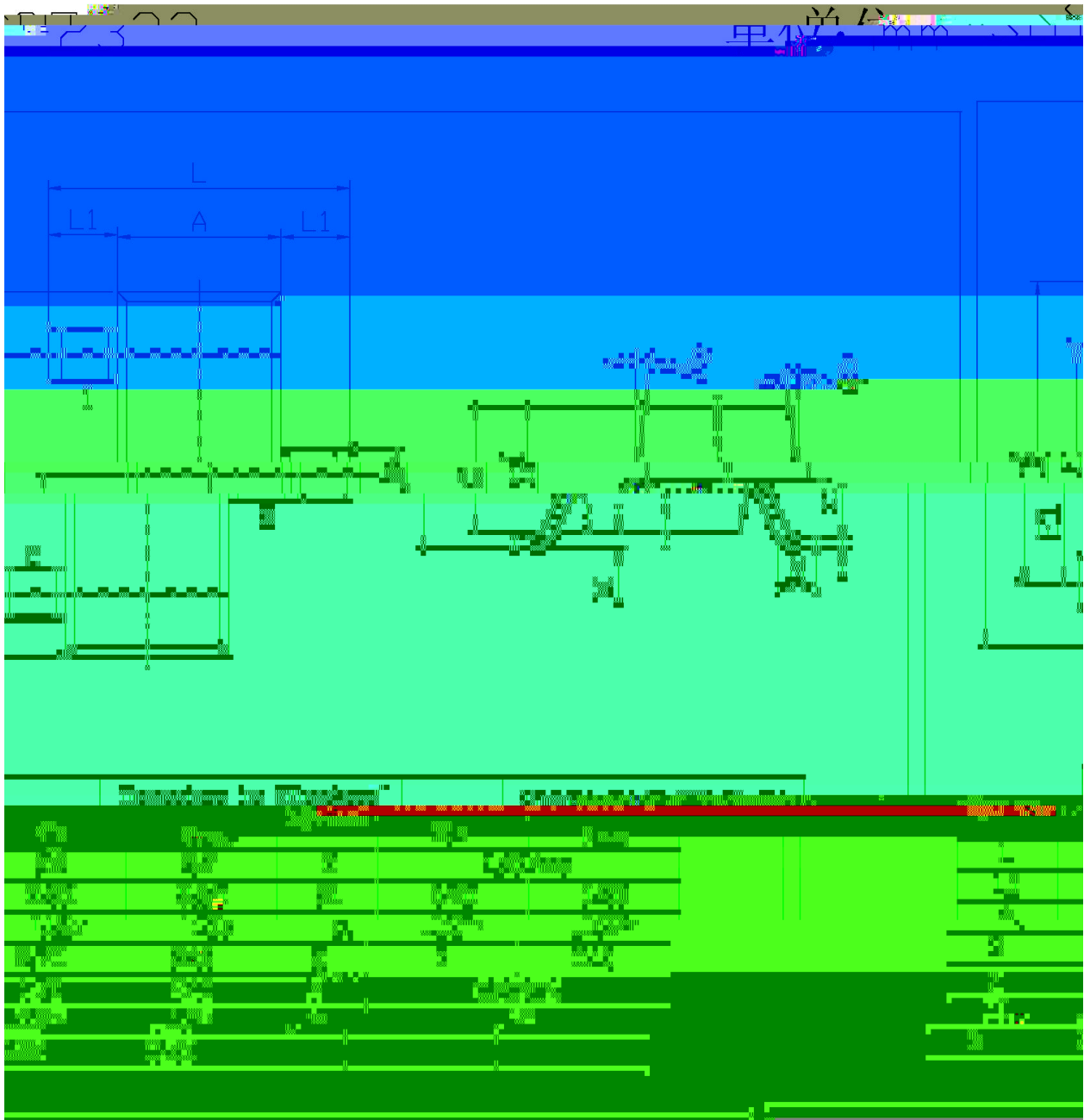


**DC current gain  $h_{FE} = f(I_C)$**

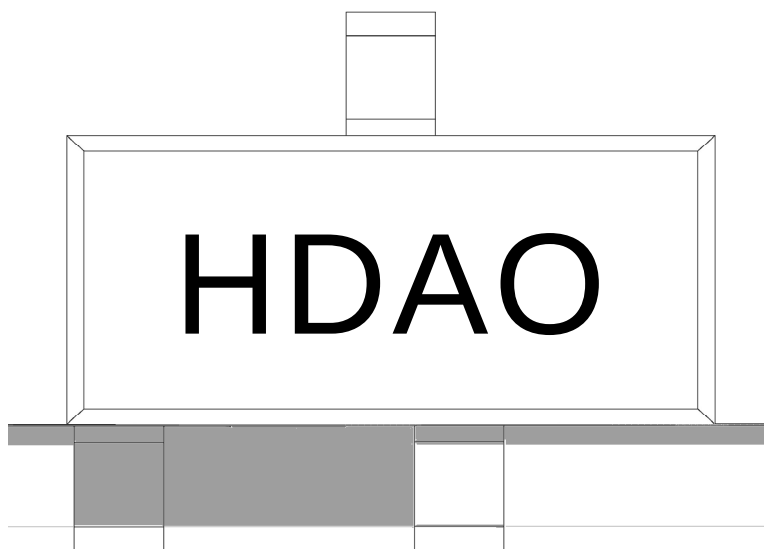
$V_{CE} = 1V$



/ Package Dimensions



**/ Marking Instructions**



H

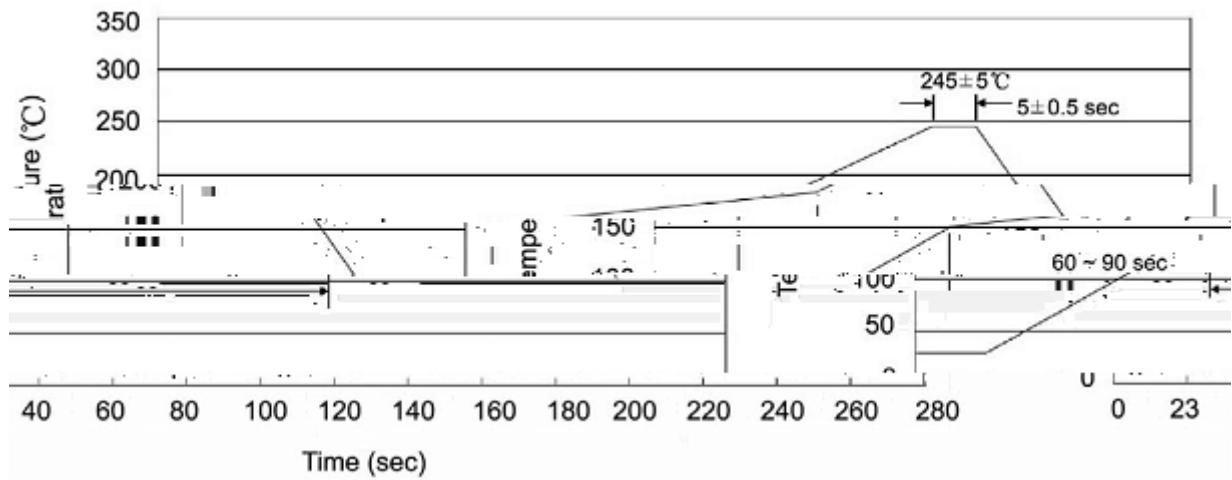
DAO

Note:

H: Company Code

DAO: Product Type Code

(     ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



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      |                 |                 |                       |                 | Dimension (unit mm <sup>3</sup> ) |             |             |
|--------------|------------|-----------------|-----------------|-----------------------|-----------------|-----------------------------------|-------------|-------------|
|              | Units/Reel | Reels/Inner Box | Units/Inner Box | Inner Boxes/Outer Box | Units/Outer Box | Reel                              | Inner Box   | Outer Box   |
| SOT-23       | 3,000      | 10              | 30,000          | 6                     | 180,000         | 7 ×8                              | 180×120×180 | 390×385×205 |

/ Notices