

## / Descriptions

SOT-23

NPN

Silicon NPN Digital transistor in a SOT-23 Plastic Package.

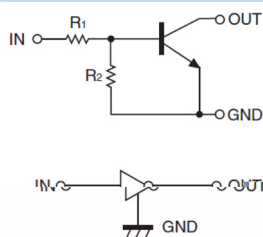
## / Features

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process, HF Product.

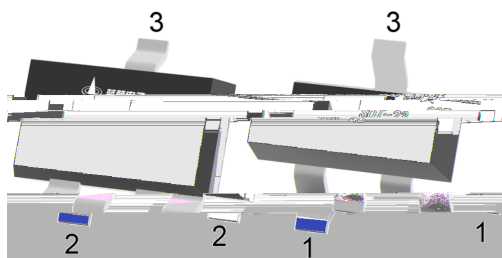
## / Applications

Switching, inverter circuit, interface circuit and driver circuit applications.

## / Equivalent Circuit



## / Pinning



PIN 1 IN PIN 2 GND PIN 3 OUT

## / hFE Classifications & Marking

|         |     |
|---------|-----|
| Marking | H64 |
|---------|-----|

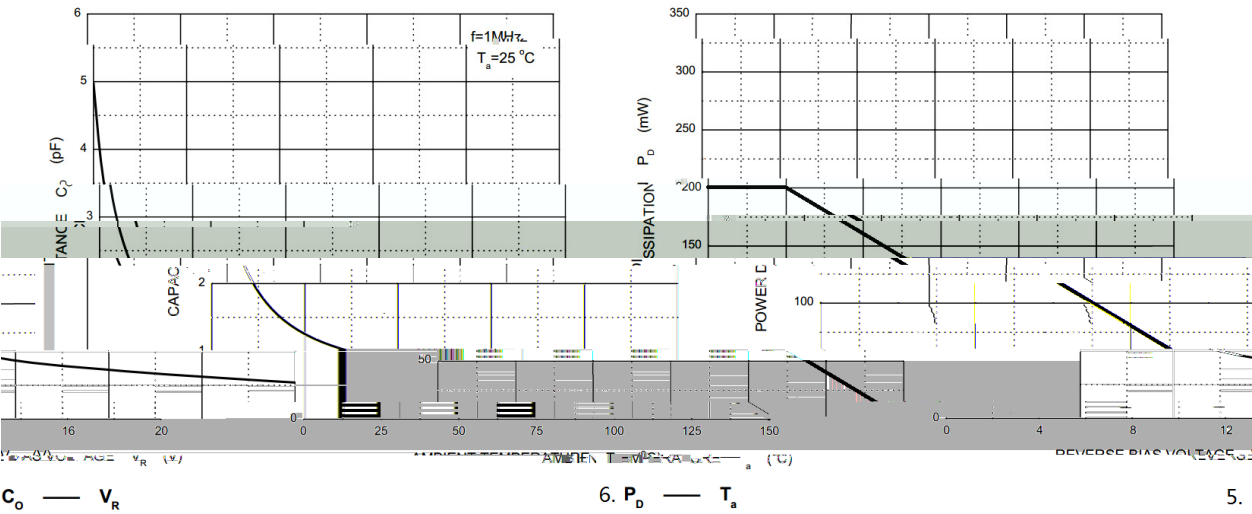
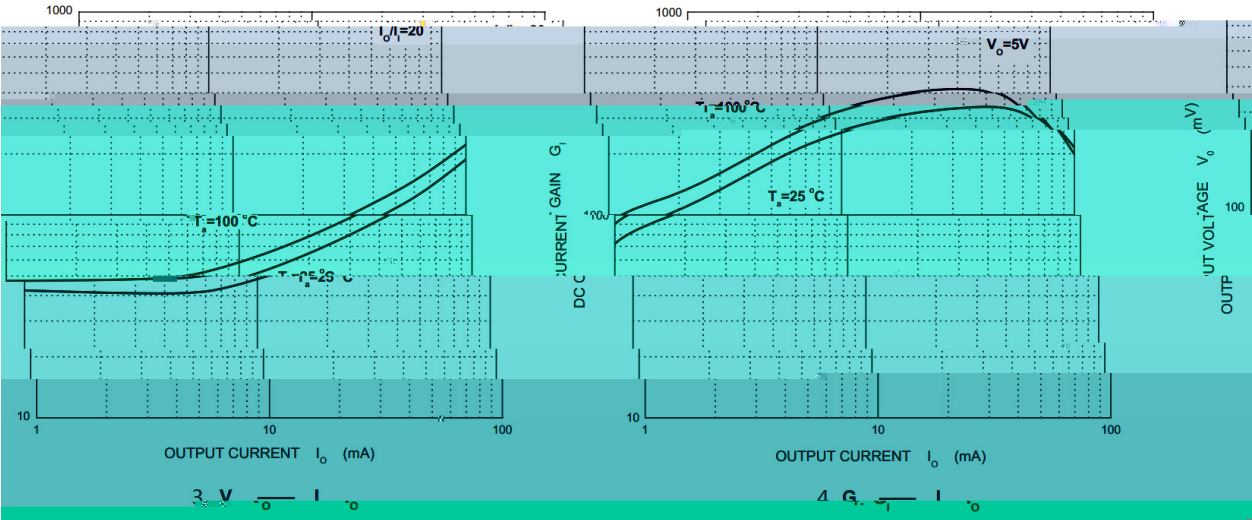
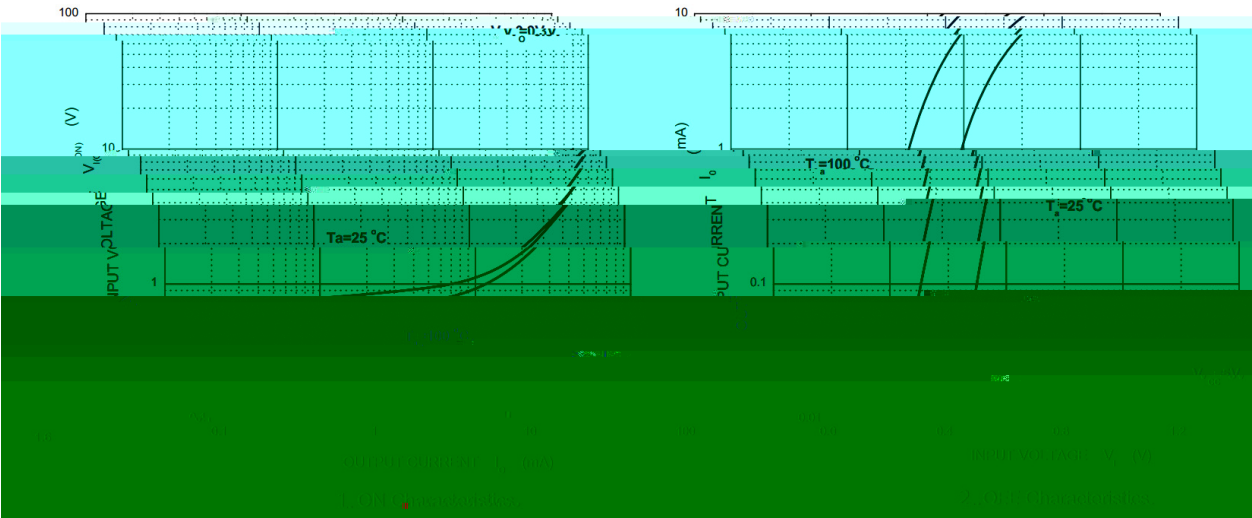
/ Absolute Maximum Ratings( $T_a=25$  )

| Parameter                 | Symbol    | Rating  | Unit |
|---------------------------|-----------|---------|------|
| Supply Voltage            | $V_{CC}$  | 50      | V    |
| Input Voltage             | $V_{IN}$  | -6~40   | V    |
| Output Current            | $I_O$     | 70      | mA   |
| Peak Collector Current    | $I_{CM}$  | 100     | mA   |
| Power Dissipation         | $P_D$     | 200     | mW   |
| Junction Temperature      | $T_j$     | 150     |      |
| Storage Temperature Range | $T_{stg}$ | -55 150 |      |

/ Electrical Characteristics( $T_a=25$  )

| Parameter              | Symbol       | Test Conditions                        | Min | Typ | Max  | Unit       |
|------------------------|--------------|----------------------------------------|-----|-----|------|------------|
| Input Voltage(OFF)     | $V_{I(off)}$ | $V_{CC}=5.0V$ $I_O=100\mu A$           | 0.3 |     |      | V          |
| Input Voltage(ON)      | $V_{I(on)}$  | $V_O=0.3V$ $I_O=1mA$                   |     |     | 1.4  | V          |
| Output Voltage         | $V_{O(on)}$  | $I_O=5mA$ $I_I=0.25mA$                 |     | 0.1 | 0.3  | V          |
| Input Current          | $I_I$        | $V_I=5.0V$                             |     |     | 0.88 | mA         |
| Output Cut-off Current | $I_{O(off)}$ | $V_{CC}=50V$ $V_I=0V$                  |     |     | 0.5  | $\mu A$    |
| DC Current Gain        | $G_I$        | $V_O=5.0V$ $I_O=5.0mA$                 | 68  |     |      |            |
| Transition Frequency   | $f_T$        | $V_{CE}=10V$ $I_C=5.0mA$<br>$f=100MHz$ |     | 250 |      | MHz        |
| Resistance1            | $R_1$        |                                        | 7   | 10  | 13   | K $\Omega$ |
| Resistance Ratio       | $R_2/R_1$    |                                        | 3.7 | 4.7 | 5.7  |            |

/ Electrical Characteristic Curve

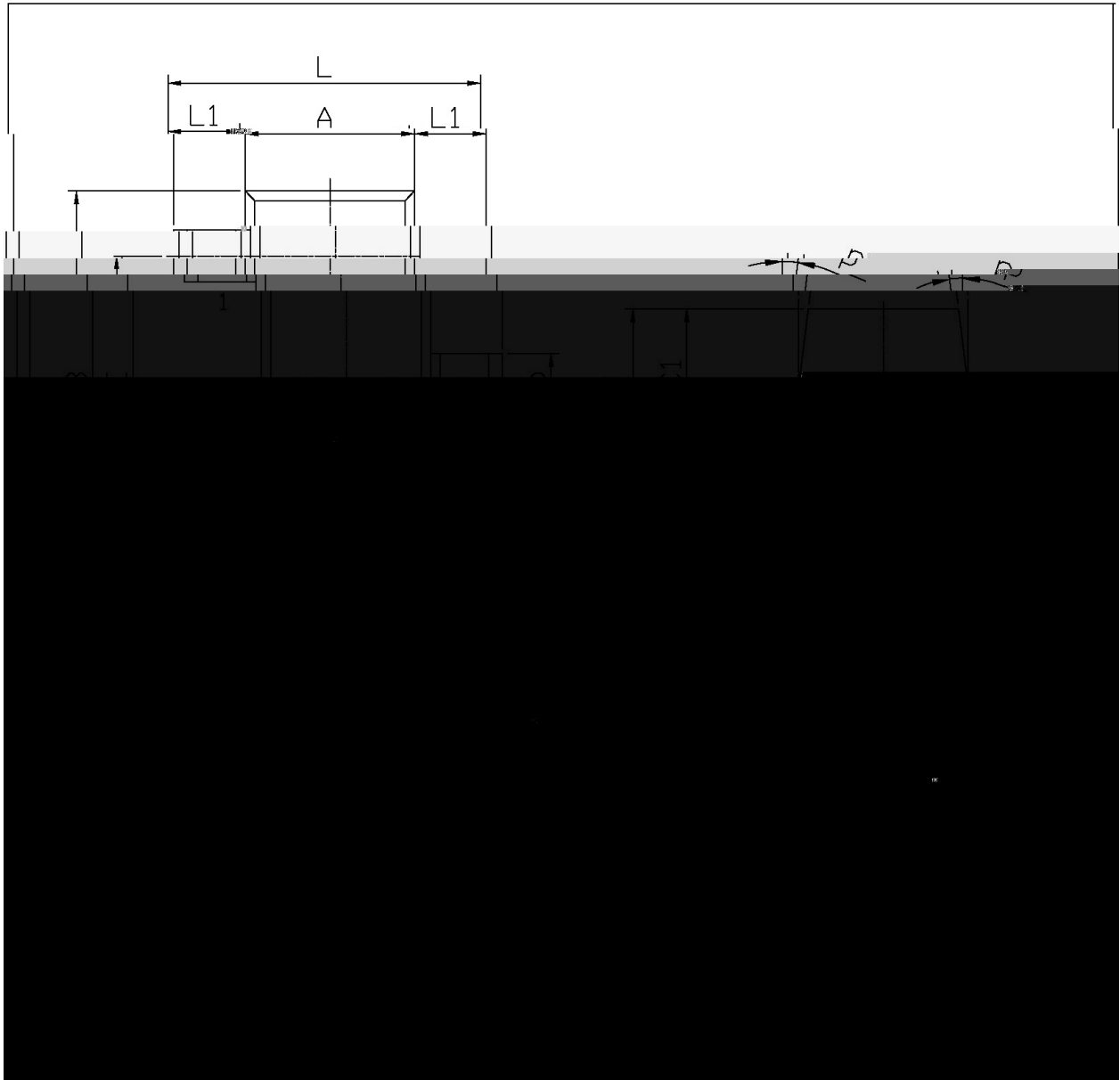


$C_o$  —  $V_R$  6.  $P_D$  —  $T_a$  5.

## / Package Dimensions

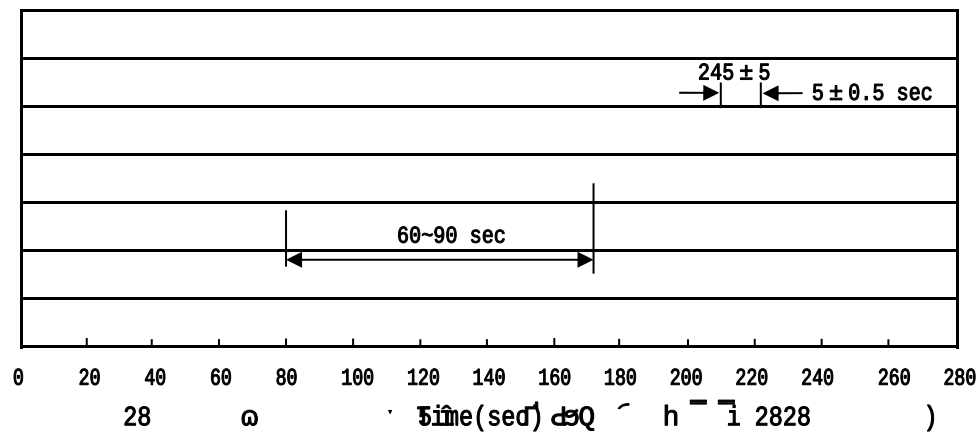
SOT-23

单位: 元





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



Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 , 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<br>封装形式 | Units 包装数量 |      |        |     |         | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|------------|------|--------|-----|---------|-----------------------------------------|-------------|-------------|
|                      | 只 卷盘       | 卷盘 盒 | 只 盒    | 盒 箱 | 只 箱     |                                         | 盒           | 箱           |
| SOT-23               | 3,000      | 10   | 30,000 | 6   | 180,000 | 7 ×8                                    | 180×120×180 | 390×385×205 |

/ Notices