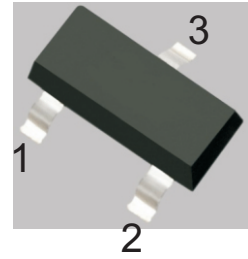


**SS8050**
**NPN TRANSISTOR**
**FEATURES**

- Complimentary to SS8550

**SOT-23**

 1.BASE  
 2.EMITTER  
 3.COLLECTOR

**MAXIMUM RATINGS (Ta=25°C unless otherwise noted)**

| Parameter  | Symbol         | Value    | Unit |
|--|----------------|----------|------|
| Collector-Base Voltage                           | $V_{CB0}$      | 40       | V    |
| Collector-Emitter Voltage                        | $V_{CEO}$      | 25       | V    |
| Emitter-Base Voltage                             | $V_{EBO}$      | 5        | V    |
| Collector Current — Continuous                   | $I_C$          | 1.5      | A    |
| Collector Power Dissipation                      | $P_C$          | 300      | mW   |
| Thermal Resistance From Junction To Ambient      | $R_{thJA}$     | 417      | °C/W |
| Operation Junction and Storage Temperature Range | $T_J, T_{stg}$ | -55~+150 | °C   |

**CLASSIFICATION OF  $h_{FE1}$** 

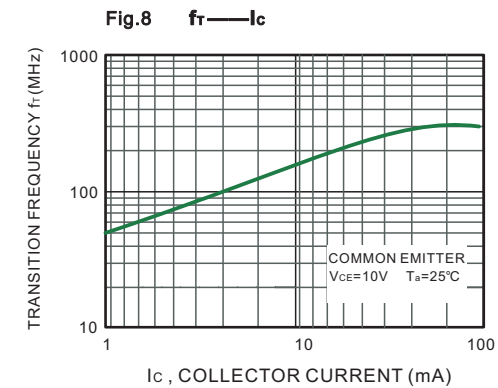
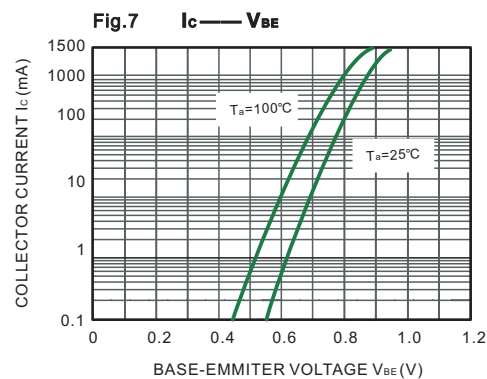
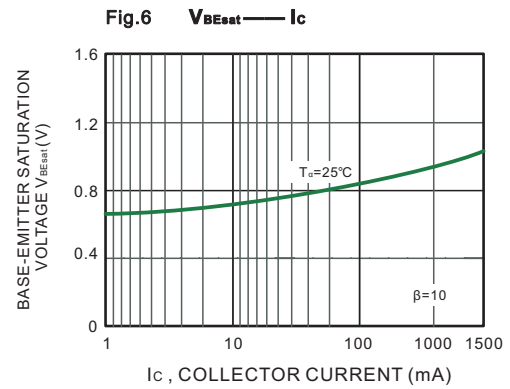
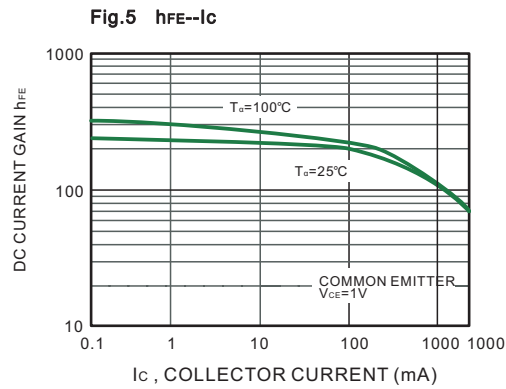
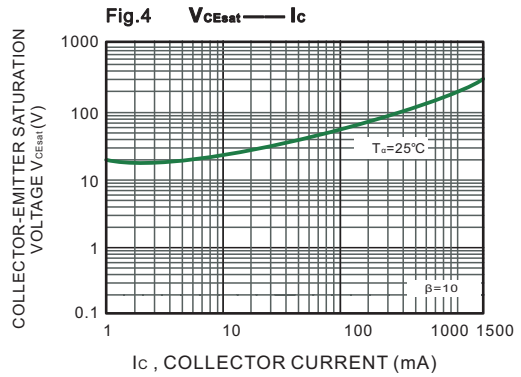
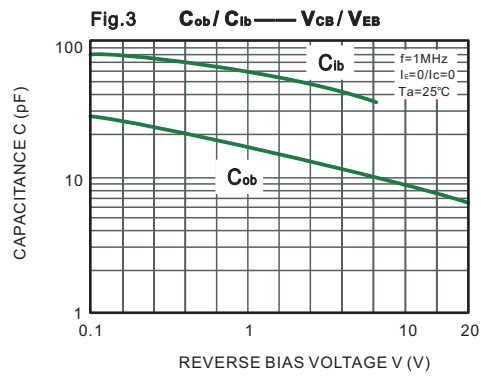
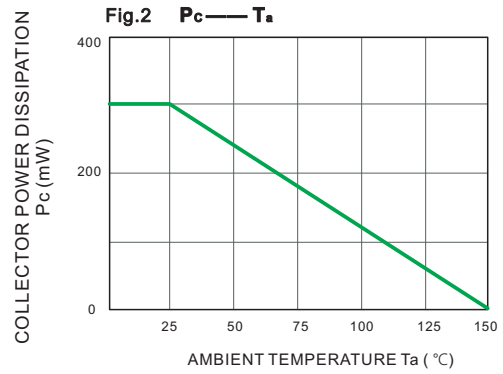
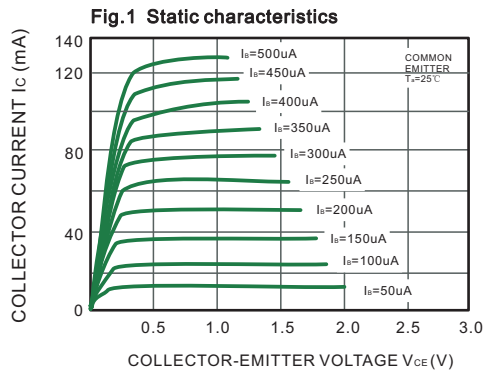
| Rank  | L       | H       | J       |
|-------|---------|---------|---------|
| Range | 120-200 | 200-350 | 300-400 |

**ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)**

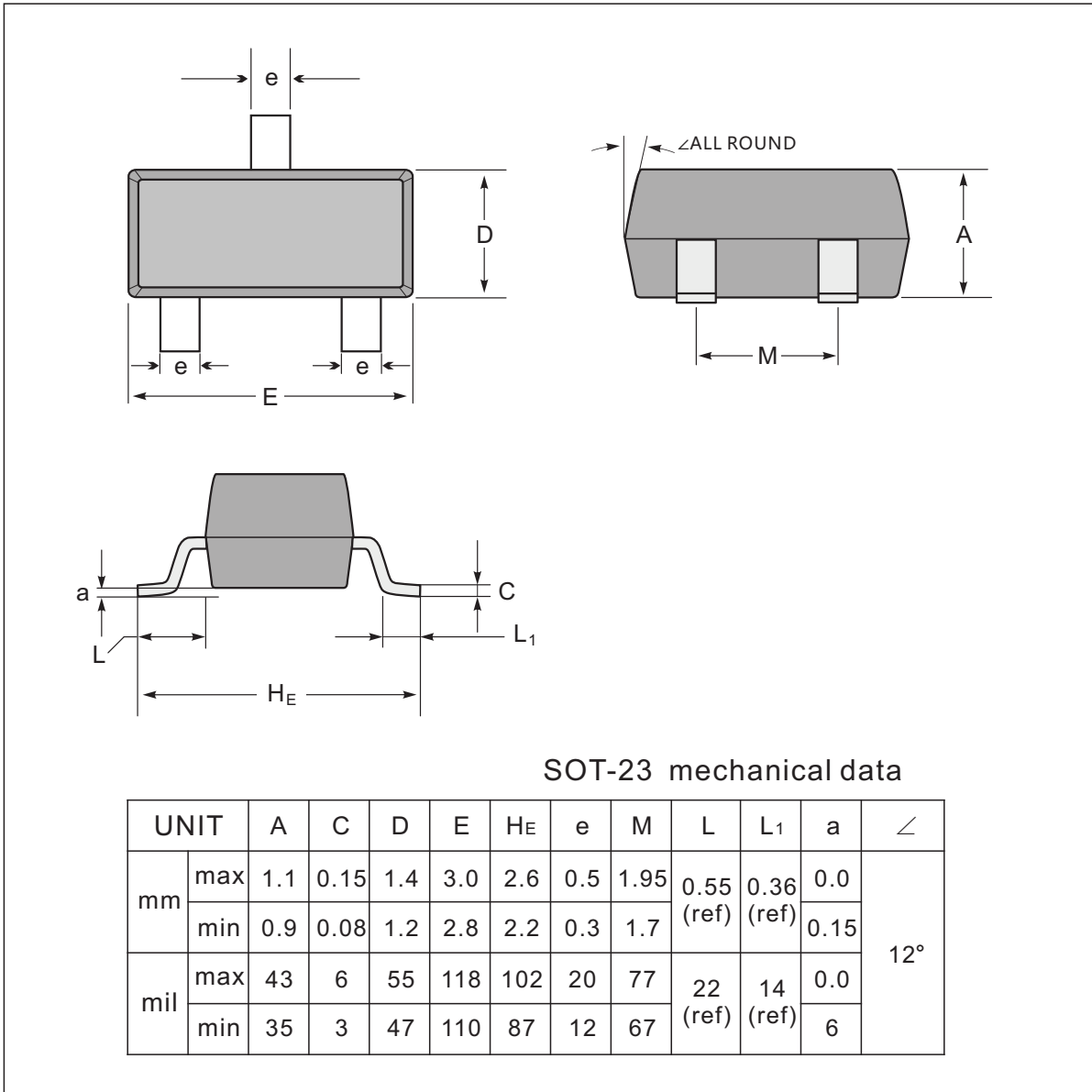
| Parameter                            | Symbol        | Test conditions                                     | Min | Typ | Max | Unit    |
|--------------------------------------|---------------|---|-----|-----|-----|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = 100\mu A, I_E = 0$                           | 40  |     |     | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = 0.1\text{ mA}, I_B = 0$                      | 25  |     |     | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = 100\mu A, I_C = 0$                           | 5   |     |     | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = 40V, I_E = 0$                             |     |     | 0.1 | $\mu A$ |
| Collector cut-off current            | $I_{CEO}$     | $V_{CE} = 20V, I_E = 0$                             |     |     | 0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 5V, I_C = 0$                              |     |     | 0.1 | $\mu A$ |
| DC current gain                      | $h_{FE1}$     | $V_{CE} = 1V, I_C = 100\text{mA}$                   | 120 |     | 400 |         |
|                                      | $h_{FE2}$     | $V_{CE} = 1V, I_C = 800\text{mA}$                   | 40  |     |     |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 800\text{mA}, I_B = 80\text{mA}$             |     |     | 0.5 | V       |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = 800\text{mA}, I_B = 80\text{mA}$             |     |     | 1.2 | V       |
| Transition frequency                 | $f_T$         | $V_{CE} = 10V, I_C = 50\text{mA}, f = 30\text{MHz}$ | 100 |     |     | MHz     |



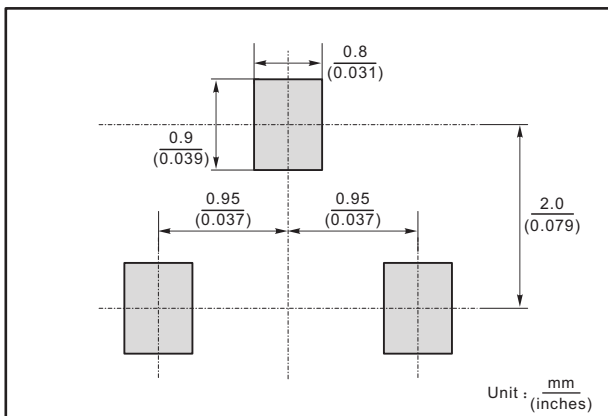
### TYPICAL CHARACTERISTICS



### SOT-23 Package Outline Dimensions



#### The recommended mounting pad size

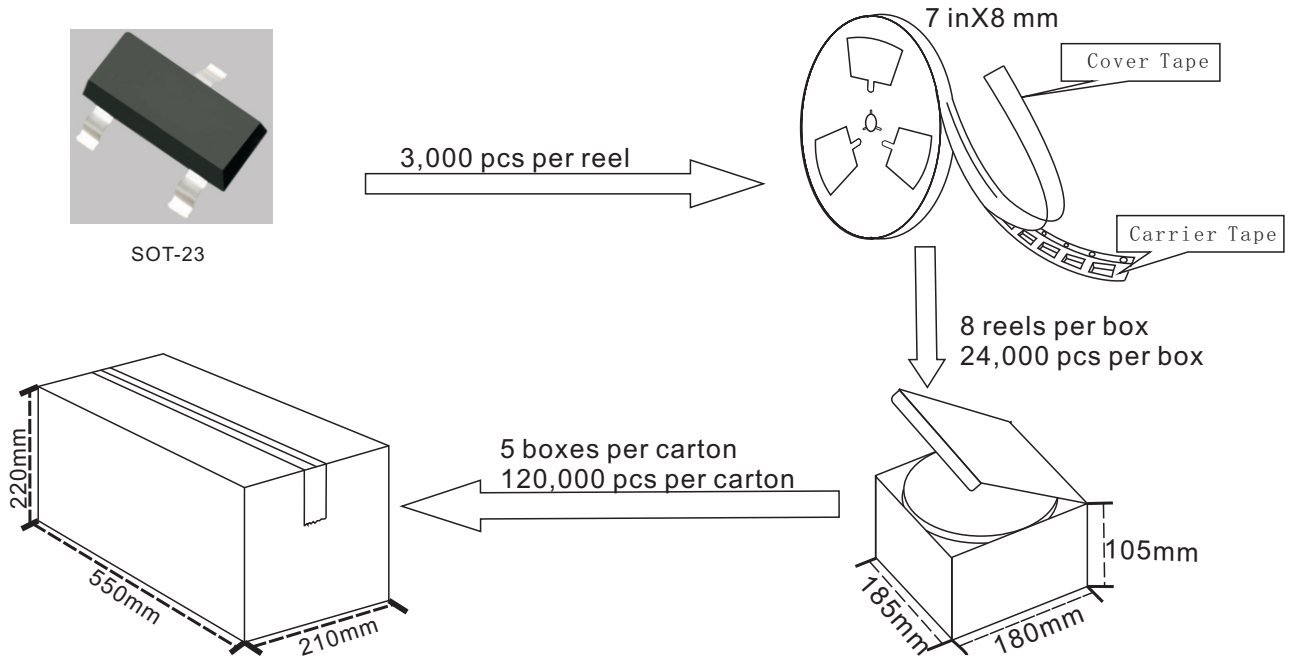


#### Marking

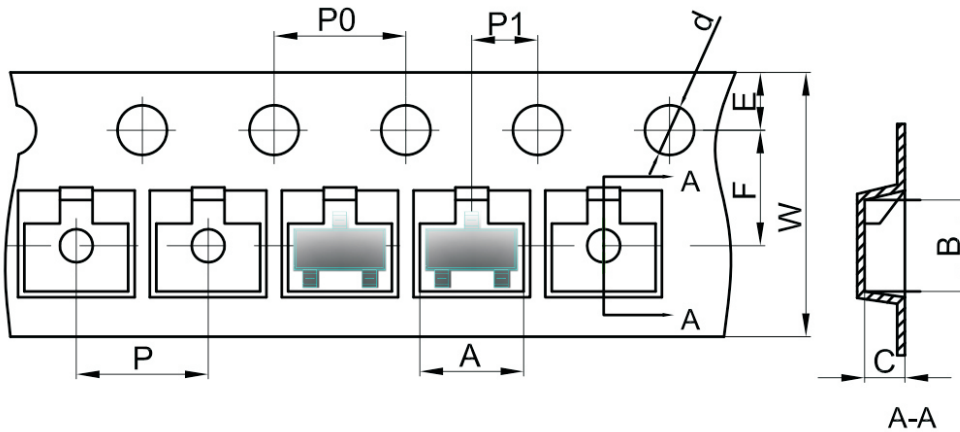
| Type number | Marking code |
|-------------|--------------|
| SS8050      | Y1           |

## SOT-23 Packing

1. The method of packaging and dimension are shown as below figure. (Dimension in mm)



### SOT-23 Embossed Carrier Tape



Dimensions are in millimeter

| Pkg type | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
|----------|------|------|------|-------|------|------|------|------|------|------|
| SOT-23   | 3.15 | 2.77 | 1.22 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

### SOT-23 Tape Leader and Trailer

