

Silicon PNP transistor in a SOT-23 Plastic Package.

$V_{CE(sat)}$

High current gain, Low collector-emitter saturation voltage.

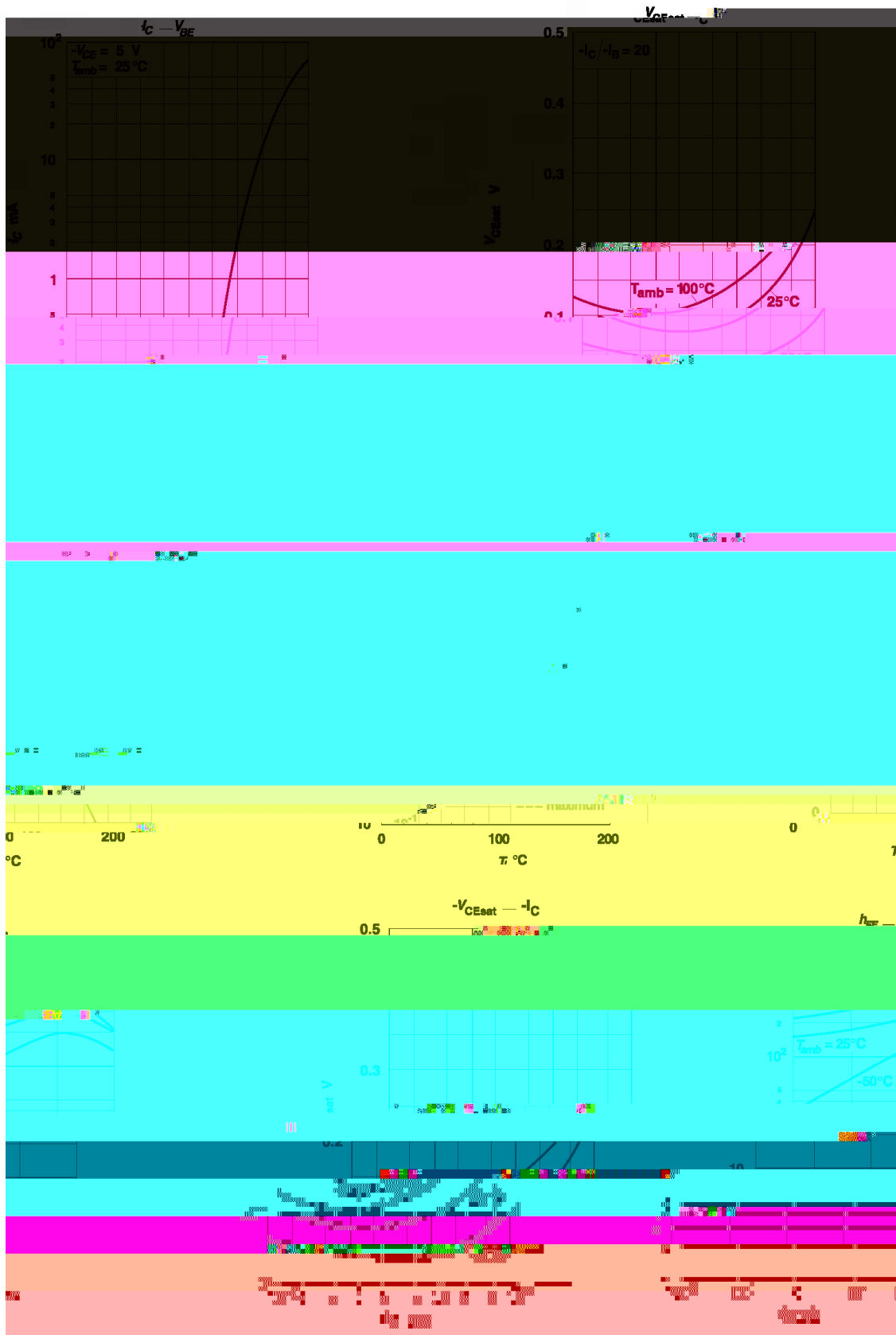
**/ Absolute Maximum Ratings(Ta=25 )**

| Parameter                      | Symbol    | Rating  | Unit |
|--------------------------------|-----------|---------|------|
| Collector to Base Voltage      | $V_{CBO}$ | -50     | V    |
| Collector to Emitter Voltage   | $V_{CEO}$ | -45     | V    |
| Emitter to Base Voltage        | $V_{EBO}$ | -5.0    | V    |
| Collector Current - Continuous | $I_C$     | -100    | mA   |
| Collector Power Dissipation    | $P_C$     | 350     | mW   |
| Junction Temperature           | $T_j$     | 150     |      |
| Storage Temperature Range      | $T_{stg}$ | -55 150 |      |

**/ Electrical Characteristics(Ta=25 )**

| Parameter                               | Symbol           | Test Conditions                                              | Min  | Typ    | Max    | Unit    |
|-----------------------------------------|------------------|--------------------------------------------------------------|------|--------|--------|---------|
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$        | $I_C=-10mA$ $I_B=0$                                          | -45  |        |        | V       |
| Collector to Base Breakdown Voltage     | $V_{CBO}$        | $I_C=-10\mu A$ $I_E=0$                                       | -50  |        |        | V       |
| Emitter to Base Breakdown Voltage       | $V_{EBO}$        | $I_E=-10\mu A$ $I_C=0$                                       | -5.0 |        |        | V       |
| Collector Cut-Off Current               | $I_{CBO}$        | $V_{CB}=-30V$ $I_E=0$                                        |      |        | -0.015 | $\mu A$ |
| DC Current Gain                         | $h_{FE}$         | $V_{CE}=-5.0V$ $I_C=-2.0mA$                                  | 125  |        | 800    |         |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)(1)}$ | $I_C=-10mA$ $I_B=-0.5mA$                                     |      | -0.075 | -0.3   | V       |
|                                         | $V_{CE(sat)(2)}$ | $I_C=-100mA$ $I_B=-5.0mA$                                    |      | -0.25  | -0.65  | V       |
| Base to Emitter Saturation Voltage      | $V_{BE(sat)(1)}$ | $I_C=-10mA$ $I_B=-0.5mA$                                     |      | -0.7   |        | V       |
|                                         | $V_{BE(sat)(2)}$ | $I_C=-100mA$ $I_B=-5.0mA$                                    |      | -0.85  |        | V       |
| Base to Emitter Voltage                 | $V_{BE(1)}$      | $V_{CE}=-5.0V$ $I_C=-2.0mA$                                  | -0.6 | -0.65  | -0.75  | V       |
|                                         | $V_{BE(2)}$      | $V_{CE}=-5.0V$ $I_C=-10mA$                                   |      |        | -0.82  | V       |
| Transition Frequency                    | $f_T$            | $V_{CE}=-5.0V$ $I_C=-10mA$<br>$f=100MHz$                     |      | 150    |        | MHz     |
| Collector Output Capacitance            | $C_{ob}$         | $V_{CB}=-10V$ $I_E=0$<br>$f=1.0MHz$                          |      | 4.5    |        | pF      |
| Noise Figure                            | NF               | $V_{CE}=-5.0V$ $I_C=-200\mu A$<br>$R_g=10K\Omega$ $f=1.0KHz$ |      |        | 4.0    | dB      |

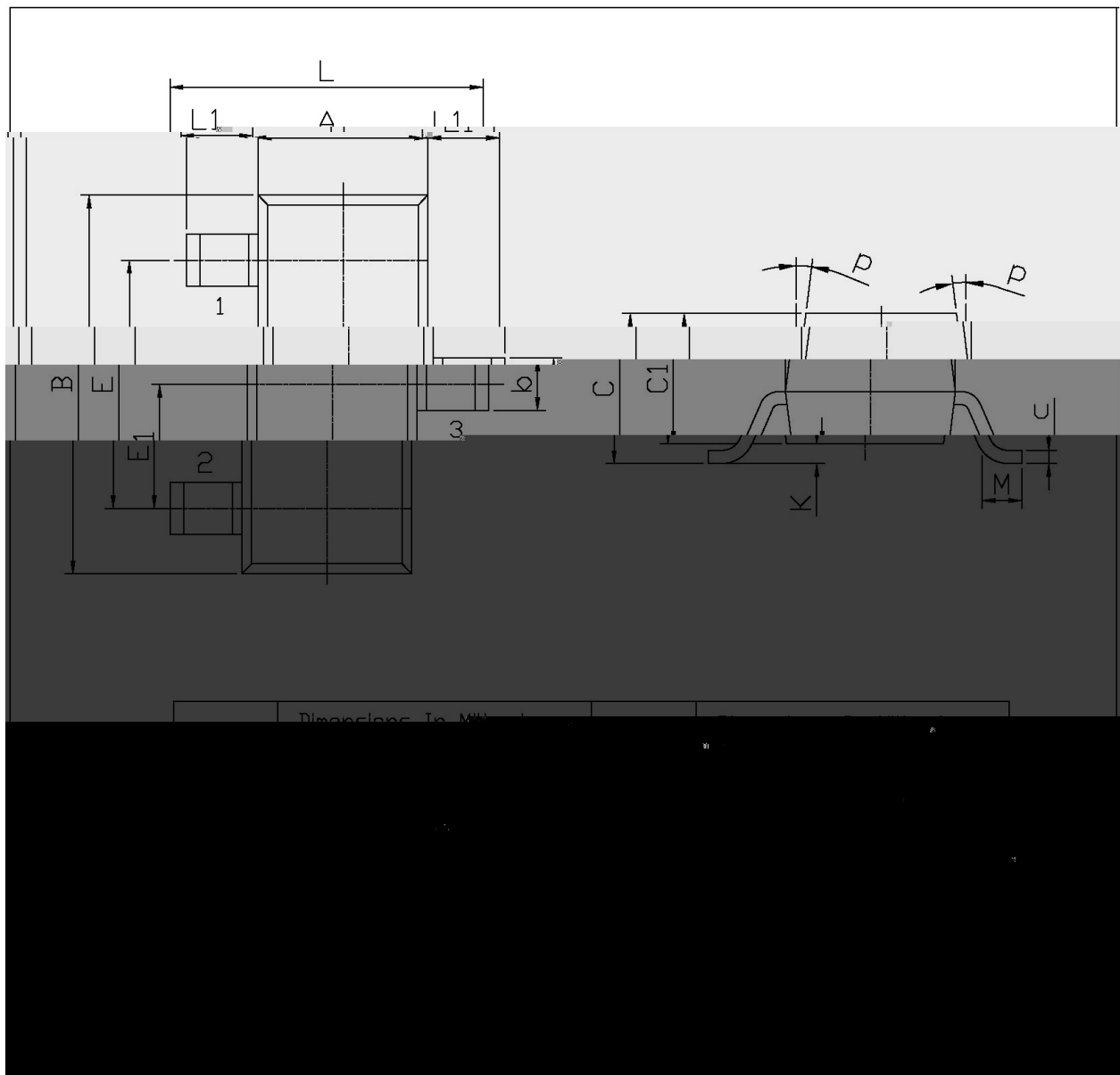
/ Electrical Characteristic Curve



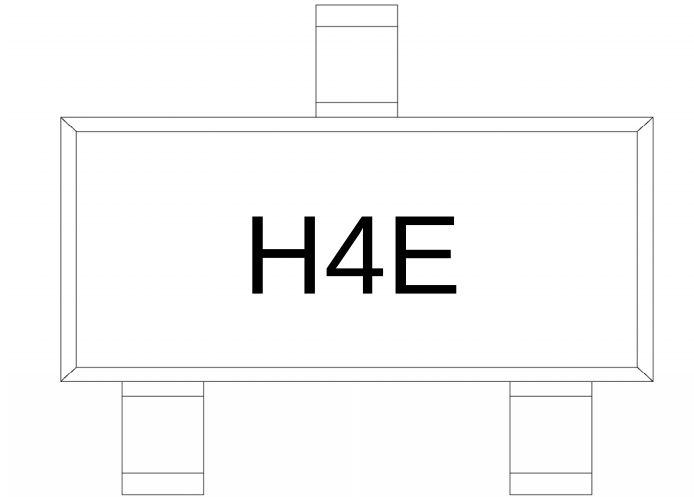
/ Package Dimensions

SOT-23

单位: mm



**/ Marking Instructions**



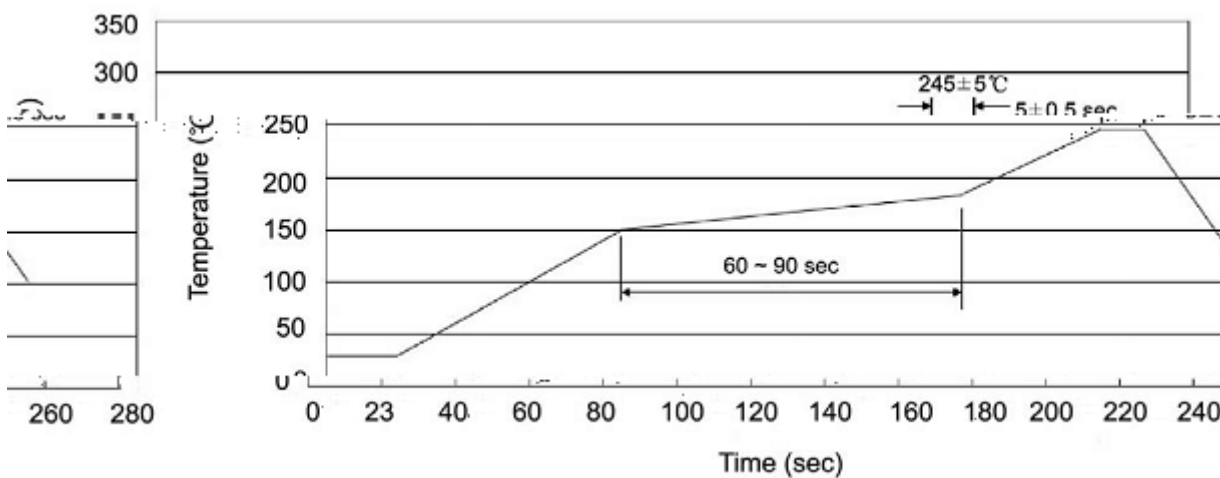
Note:

H: Company Code.

4E: 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<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|-----------------------------------------|-------------|-------------|
|                      | Units/Reel<br>只/卷盘 | Reels/Inner Box<br>卷盘/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Reel                                    | Inner Box 盒 | Outer Box 箱 |
| SOT-23               | 3,000              | 10                      | 30,000                 | 6                            | 180,000                | 7 ×8                                    | 180×120×180 | 390×385×205 |

## / Notices