

**/ Descriptions**

SOT-23

NPN

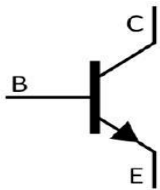
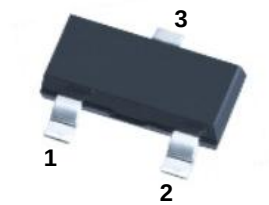
Silicon NPN transistor in a SOT-23 Plastic Package.

**/ Features**

Low current, high voltage.

**/ Applications**

Telephony and professional communication equipment.

**/ Equivalent Circuit****/ Pinning**

PIN1 Base      PIN 2 Emitter      PIN 3 Collector

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

|                |      |
|----------------|------|
| $h_{FE}$ Range | >50  |
| Marking        | H1XW |

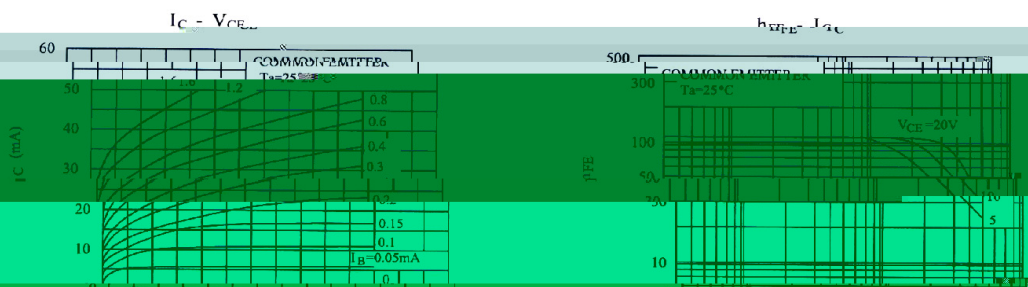
**/ Absolute Maximum Ratings(Ta=25 )**

| Parameter                          | Symbol    | Rating  | Unit |
|------------------------------------|-----------|---------|------|
| Collector to Base Voltage          | $V_{CBO}$ | 250     | V    |
| Collector to Emitter Voltage       | $V_{CEO}$ | 250     | V    |
| Emitter to Base Voltage            | $V_{EBO}$ | 5.0     | V    |
| Collector Current - Continuous     | $I_C$     | 50      | mA   |
| Peak Collector Current- Continuous | $I_{CM}$  | 100     | mA   |
| Base Current                       | $I_B$     | 50      | mA   |
| Collector Power Dissipation        | $P_C$     | 250     | 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 Cut-Off Current               | $I_{CBO}$     | $V_{CB}=200V$ $I_E=0$<br>$T_j=150$    |     |     | 10   | $\mu A$ |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=200V$ $I_E=0$                 |     |     | 0.01 | $\mu A$ |
| Emitter Cut-Off Current                 | $I_{EBO}$     | $V_{EB}=5.0V$ $I_C=0$                 |     |     | 0.05 | $\mu A$ |
| DC Current Gain                         | $h_{FE}$      | $V_{CE}=20V$ $I_C=25mA$               | 50  |     |      |         |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=30mA$ $I_B=5.0mA$                |     |     | 0.6  | V       |
| Feedback Capacitance                    | $C_{re}$      | $V_{CB}=30V$ $I_E=0$<br>$f=1.0MHz$    |     |     | 1.6  | pF      |
| Transition Frequency                    | $f_T$         | $V_{CE}=10V$ $I_C=10mA$<br>$f=100MHz$ | 60  |     |      | MHz     |

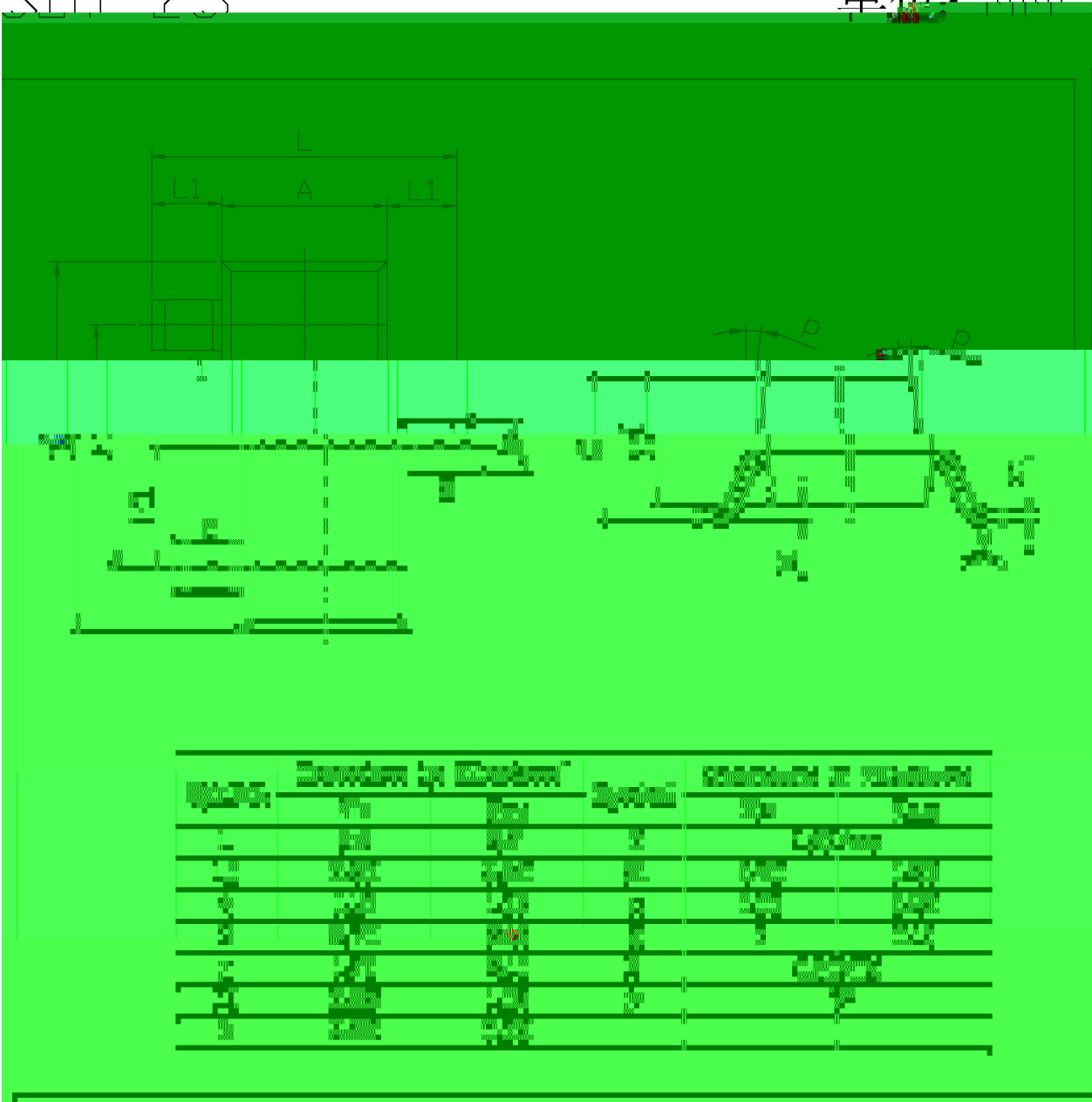
/ Electrical Characteristic Curve



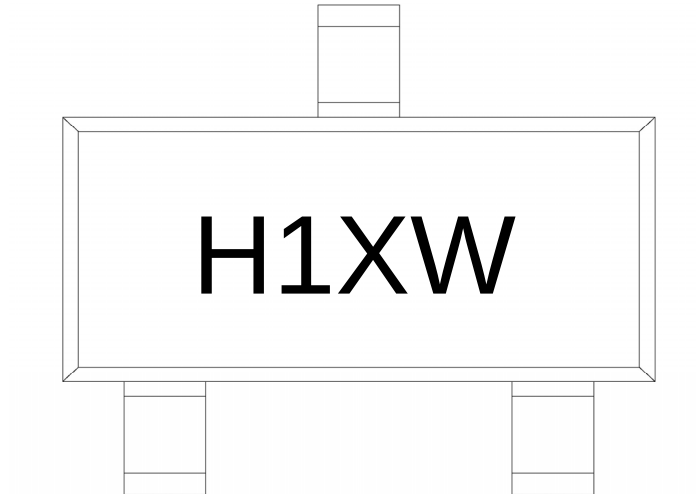
/ Package Dimensions

SOT-23

单位: mm



**/ Marking Instructions**



H

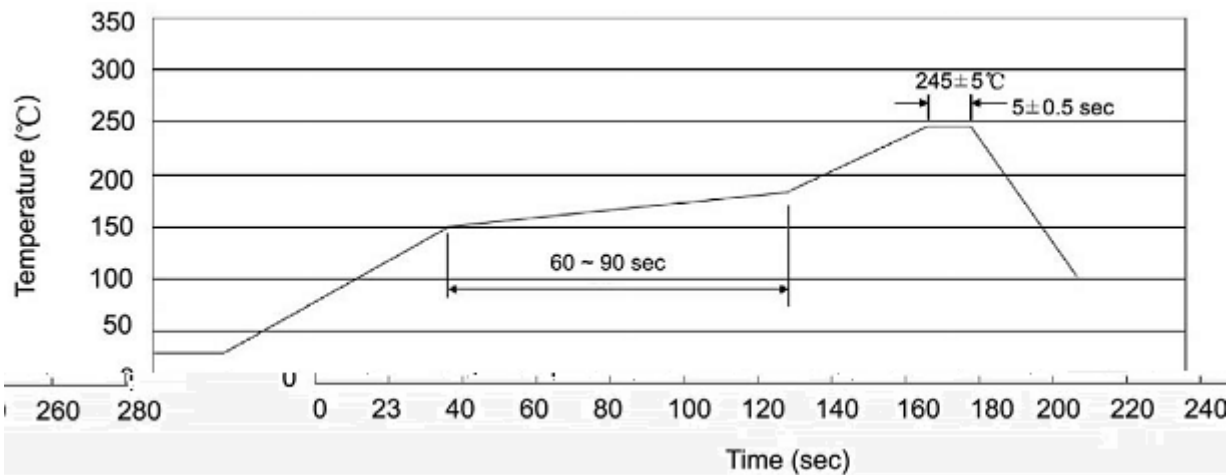
1XW

Note:

H: Company Code.

1XW: 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> ) |  |  |
|--------------|-------|--|--|--|--|-----------------------------------|--|--|
|              |       |  |  |  |  |                                   |  |  |
|              |       |  |  |  |  |                                   |  |  |

/ Notices