## "Yت / Descriptions

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

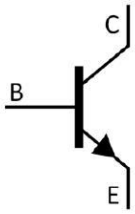
## ◕È / Features

High current gain.

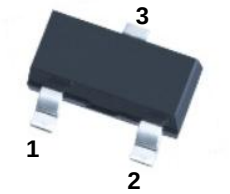
## ¥ ٍ / Applications

Applications requiring extremely high current gain device designed.

## Л ف̂ ٰ̃ ≠ ع / Equivalent Circuit




## ã ﻉ ٗ̃ / Pinning




PIN1 Base PIN 2 Emitter PIN 3 Collector

## ł. ʜ ڸ / Marking

| | |
|---|---|
| $h_{FE}$ Range | >10000 |
| Marking | H1M |

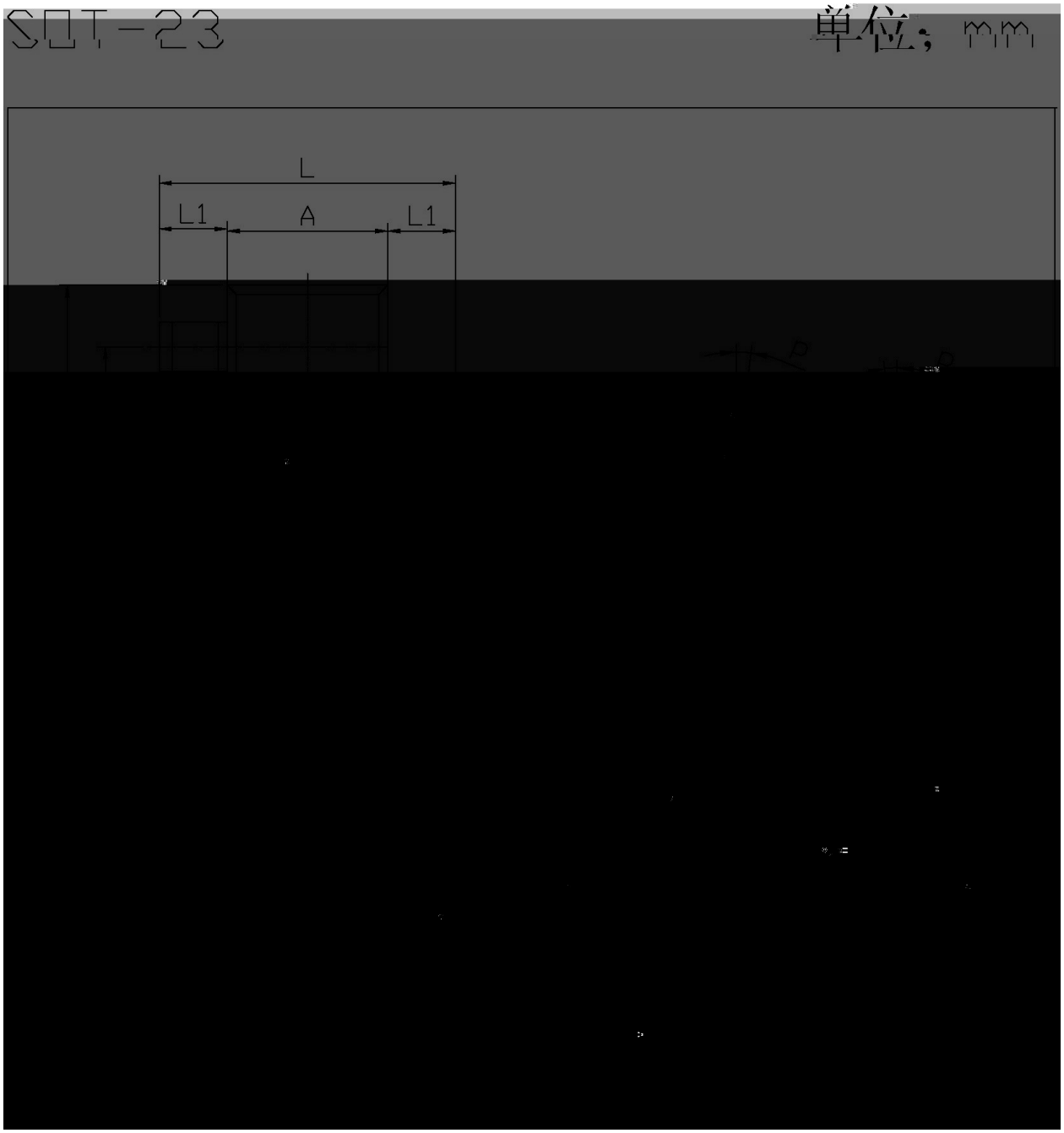
## ώ ̈ Ξ ̊Ą / Absolute Maximum Ratings(Ta=25 ɹ )

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector to Base Voltage | $V_{CBO}$ | 30 | V |
| Collector to Emitter Voltage | $V_{CEO}$ | 30 | V |
| Emitter to Base Voltage | $V_{EBO}$ | 10 | V |
| Collector Current - Continuous | $I_C$ | 300 | mA |
| Collector Power Dissipation | $P_C$ | 225 | mW |
| Junction Temperature | $T_j$ | 150 | |
| Storage Temperature Range | $T_{stg}$ | -55 150 | |

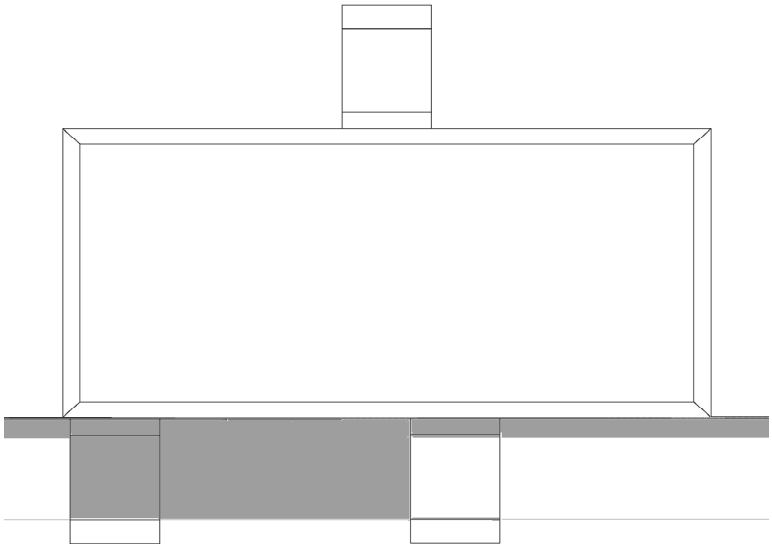
## ⁄ ∧ Ξ ̊Ą / Electrical Characteristics(Ta=25 ɹ )

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector to Base Breakdown Voltage | $V_{CBO}$ | $I_C$=100μA $I_E$=0 | 30 | | | V |
| Collector to Emitter Breakdown Voltage | $V_{CEO}$ | $I_C$=500μA $I_B$=0 | 30 | | | V |
| Emitter to Base Breakdown Voltage | $V_{EBO}$ | $I_E$=100μA $I_C$=0 | 10 | | | V |
| Collector Cut-Off Current | $I_{CBO}$ | $V_{CB}$=30 V $I_E$=0 | | | 0.1 | μA |
| Emitter Base Cut-Off Current | $I_{EBO}$ | $V_{EB}$=10V $I_C$=0 | | | 0.1 | μA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}$=5.0V $I_C$=10mA | 5000 | | | |
| | $h_{FE(2)}$ | $V_{CE}$=5.0V $I_C$=100mA | 10000 | | | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$=100mA $I_B$=0.1mA | | | 1.5 | V |
| Base-Emitter On Voltage | $V_{BE}$ | $I_C$=100mA $V_{CE}$=5.0V | | | 2.0 | V |
| Transition Frequency | $f_T$ | $I_C$=10mA $V_{CE}$=5.0V f=100MHz | 125 | | | MHz |

## ᵘ ĖÒĻ ʃ / Package Dimensions



## ł. Ļ'Ω / Marking Instructions



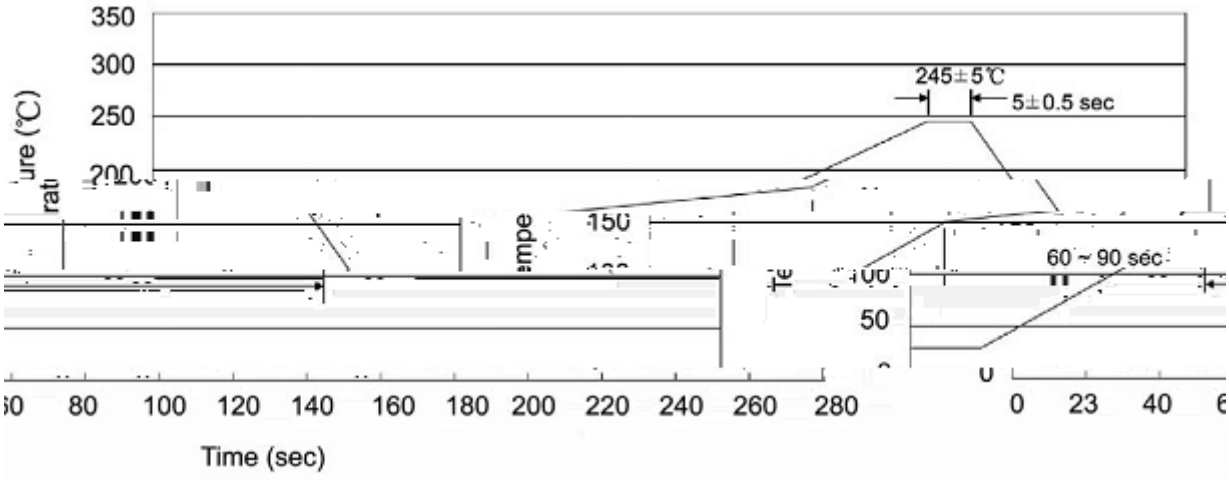
H

1M

Note:

H: Company Code.

## ѫ ʃ ╕ ẘ ´E ⅵ ʃ (ᾠ ᴈ) / Wh p shudwxuh Suril oh i ru LU Uhi o r z V ro ghulq j +Se0 luhh,




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. |

## ⅎ ü q ‗ `Y Ţ / Resistance to Soldering Heat Test Conditions

| | | | |
|---|---|---|---|
| 260±5 | 10±1 sec. | Temp.:260±5 | Time:10±1 sec |

## ɔ Ŀ ≮ — / Packaging SPEC.

/ REEL

| Package Type | Units | | | | | Dimension | | (unit mm$^3$) |
|---|---|---|---|---|---|---|---|---|
| | 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 ρ ×8 | 180×120×180 | 390×385×205 |

## ä ⅴ ŗ Ω / Notices