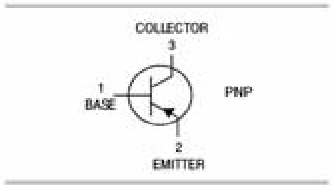
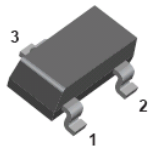
# Silicon Epitaxial Planar Transistor **M8550**

## FEATURES

- High Collector Current.($I_C$= -800 mA).
- Complementary To M8050.
- Excellent $H_{FE}$ Linearity.

Lead-free





**SOT-23**

## APPLICATIONS

- High Collector Current.

## ORDERING INFORMATION

| Type No. | Marking | Package Code |
|---|---|---|
| M8550 | Y21 | SOT-23 |

## MAXIMUM RATING @ Ta=25℃ unless otherwise specified

| **Symbol** | **Parameter** | **Value** | **Units** |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | -40 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | -25 | V |
| $V_{EBO}$ | Emitter-Base Voltage | -6 | V |
| $I_C$ | Collector Current -Continuous | -800 | mA |
| $P_C$ | Collector Dissipation | 200 | mW |
| $T_j$,$T_{stg}$ | Junction and Storage Temperature | -55 to +150 | ℃ |

## Silicon Epitaxial Planar Transistor **M8550**

### ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

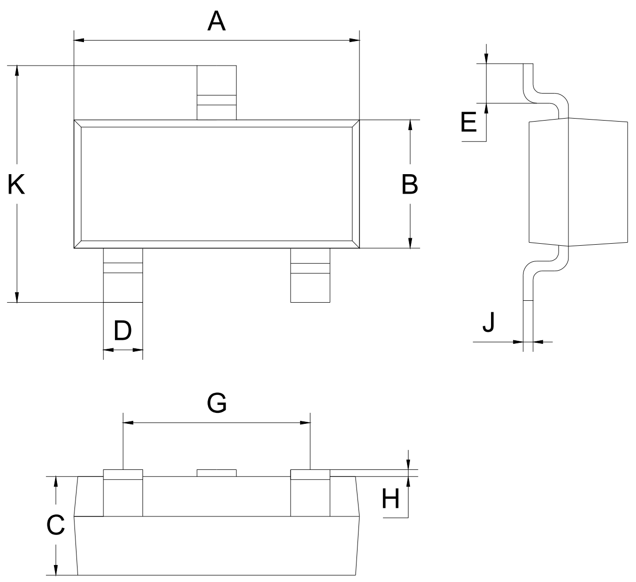
| **Parameter** | **Symbol** | **Test conditions** | **MIN** | **MAX** | **UNIT** |
|---|---|---|---|---|---|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C$=-100μA,$I_E$=0 | -40 | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C$=-0.1mA,$I_B$=0 | -25 | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E$=-100μA,$I_C$=0 | -6 | | V |
| Collector cut-off current | $I_{CBO}$ | $V_{CB}$=-35V,$I_E$=0 | | -0.1 | μA |
| Collector cut-off current | $I_{CEO}$ | $V_{CE}$=-20V,$I_B$=0 | | -0.1 | μA |
| DC current gain | $h_{FE}$ | $V_{CE}$=-1V,$I_C$=-5mA | 45 | | |
| | | $V_{CE}$=-1V,$I_C$=-100mA | 85 | 300 | |
| | | $V_{CE}$=-1V,$I_C$=-800mA | 40 | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C$=-800 mA, $I_B$=-80mA | | -0.5 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C$=-800 mA, $I_B$=-80mA | | -1.2 | V |
| Transition frequency | $f_T$ | $V_{CE}$=-6V, $I_C$= -20mA<br>f=30MHz | 150 | | MHz |

### CLASSIFICATION OF $h_{FE(1)}$

| Rank | L | H |
|---|---|---|
| Range | 85-200 | 200-300 |

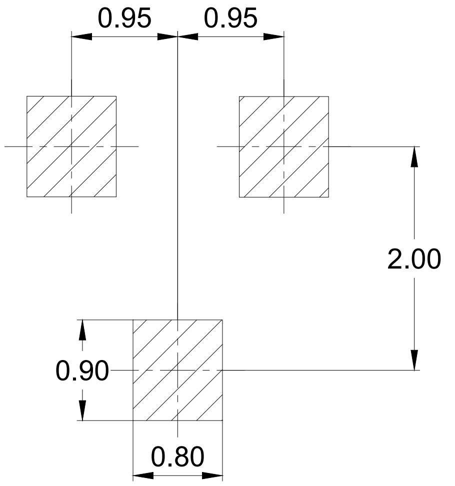
## PACKAGE OUTLINE

Plastic surface mounted package SOT-23



| SOT-23 | | |
|---|---|---|
| Dim | Min | Max |
| A | 2.70 | 3.10 |
| B | 1.10 | 1.50 |
| C | 1.0 Typical | |
| D | 0.4 Typical | |
| E | 0.35 | 0.48 |
| G | 1.80 | 2.00 |
| H | 0.02 | 0.1 |
| J | 0.1 Typical | |
| K | 2.20 | 2.60 |
| All Dimensions in mm | | |

## SOLDERING FOOTPRINT



Unit : mm

## PACKAGE INFORMATION

| Device | Package | Shipping |
|---|---|---|
| M8550 | SOT-23 | 3000/Tape&Reel |