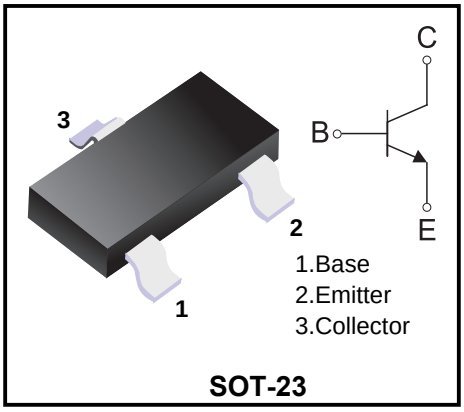
**General Purpose Amplifier**

**TRANSISTOR(NPN)**




**SOT-23**

## FEATURES

- Case: SOT-23
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- High temperature soldering guaranteed 260℃/10seconds at terminals

| Marking Code | |
|---|---|
| MMBTA43 | 2D |

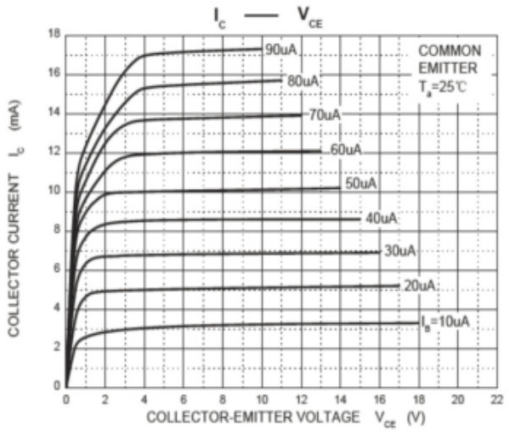
## Absolute Maximum Ratings (Ta=25℃ unless otherwise noted)

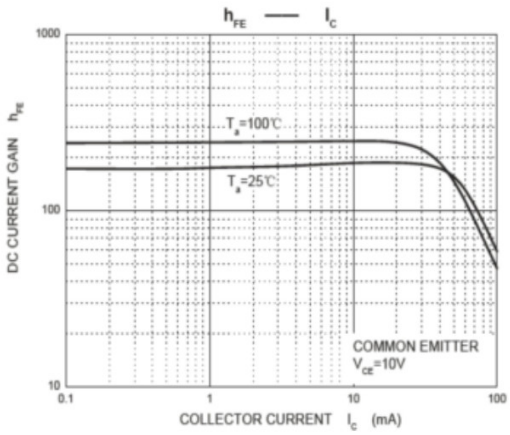
| Parameters | Symbol | Value | Unit |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 200 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | 200 | V |
| Emitter -Base Voltage | $V_{EBO}$ | 5 | V |
| Collector Current-Continuous | $I_C$ | 0.5 | A |
| Collector Power Dissipation | $P_C$ | 350 | mW |
| Junction Temperature | $T_j$ | -55∽+150 | ℃ |
| Storage Temperature | $T_{stg}$ | -55∽+150 | ℃ |
| Thermal resistance From junction to ambient | $R_{\theta JA}$ | 357 | ℃/W |

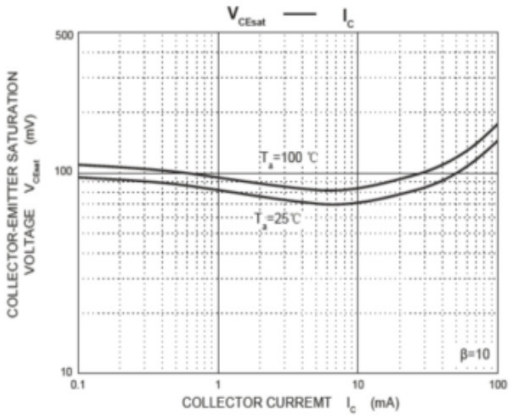
## Electrical Characteristics ($T_J$=25°C, unless otherwise noted)

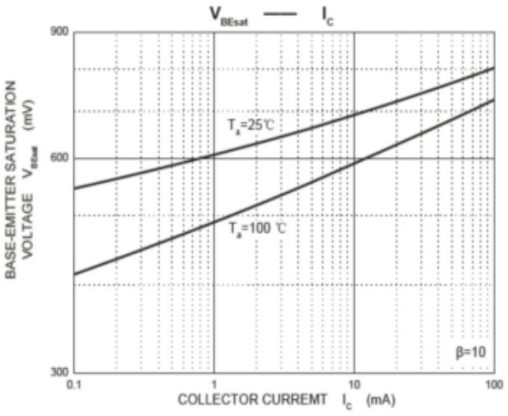
| Parameter | Test conditions | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector-base breakdown voltage | $I_C$=100μA, $I_E$=0 | $V_{(BR)CBO}$ | 200 | | | V |
| Collector-emitter breakdown voltage | $I_C$=1mA, $I_B$=0 | $V_{(BR)CEO}$ | 200 | | | V |
| Emitter-base breakdown voltage | $I_E$=10μA, $I_C$=0 | $V_{(BR)EBO}$ | 5 | | | V |
| Collector cut-off current | $V_{CB}$=100V, $I_E$=0 | $I_{CBO}$ | | | 250 | nA |
| Collector cut-off current | $V_{EB}$=5V, $I_C$=0 | $I_{EBO}$ | | | 100 | nA |
| DC current gain | $V_{CE}$=10V, $I_C$=10mA | $h_{FE(1)}$ | 40 | | | |
| | $V_{CE}$=10V, $I_C$=30mA | $h_{FE(2)}$ | 40 | | | |
| Collector-emitter saturation voltage | $I_C$=20mA, $I_B$=2mA | $V_{CE(sat)}$ | | | 0.5 | V |
| Base-emitter saturation voltage | $I_C$=20mA, $I_B$=2mA | $V_{BE(sat)}$ | | | 0.9 | V |
| Transition frequency | $V_{CE}$=20V, $I_C$=100mA, f=100MHz | $f_T$ | 50 | | | MHz |

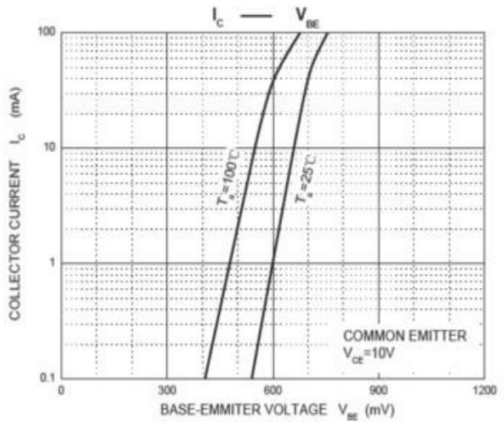
## Ratings And Characteristic Curves

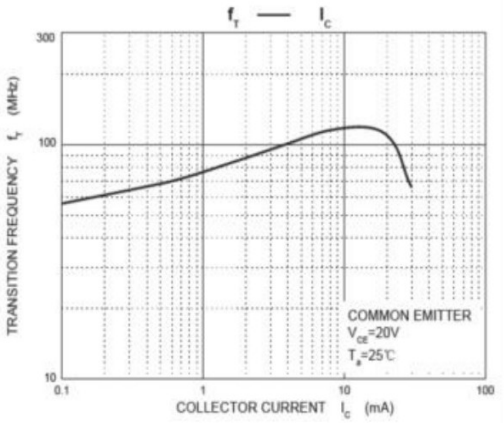


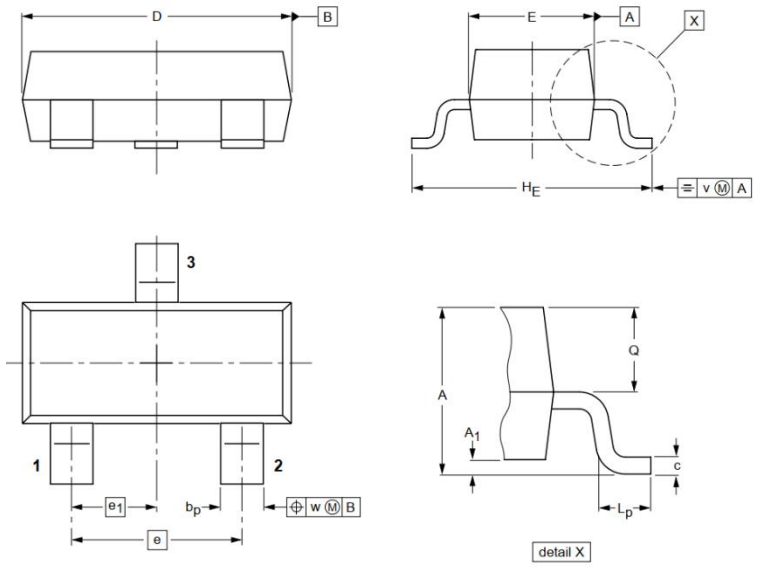



## Ordering information

| Package | Packing Description | Base Quantity | Packing Quantity |
|---|---|---|---|
| SOT-23 | Tape/Reel,7"reel | 3000pcs/Reel | 24000PCS/Box 120000PCS/Carton |

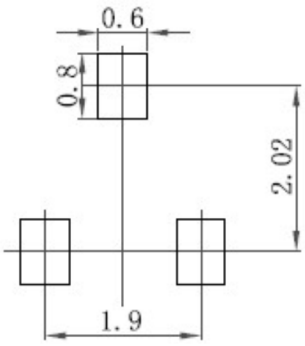
## Package Dimensions

**SOT-23**




| Dim. | Millimeter (mm) | | mil | |
|---|---|---|---|---|
| | Min. | Max. | Min. | Max. |
| A | 0.9 | 1.15 | 35 | 45 |
| A1 | 0.1 | | 3.9 | |
| bp | 0.38 | 0.48 | 15 | 19 |
| C | 0.09 | 0.15 | 3.54 | 5.9 |
| D | 2.8 | 3.0 | 110 | 118 |
| E | 1.2 | 1.4 | 47 | 55 |
| e | 1.9 | | 75 | |
| e1 | 0.95 | | 37 | |
| HE | 2.1 | 2.55 | 83 | 100 |
| Lp | 0.15 | 0.45 | 5.9 | 18 |
| Q | 0.45 | 0.55 | 18 | 22 |
| v | 0.2 | | 7.9 | |
| W | 0.1 | | 4 | |

## The recommended mounting pad size



# Disclaimer

The information presented in this document is for reference only. GuangDong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices),YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website https://www.yfwdiode.com, or consult YFW sales office for further assistance.