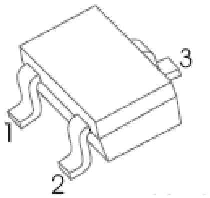
# TRANSISTOR (NPN)

## FEATURES

- High Breakdown Voltage
- Complements the 2SA1579

**SOT－323**



**1. BASE**
**2. EMITTER**
**3. COLLECTOR**

## MAXIMUM RATINGS ($T_a$=25℃ unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 120 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 120 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 5 | V |
| $I_C$ | Collector Current | 50 | mA |
| $P_C$ | Collector Power Dissipation | 200 | mW |
| $R_{\Theta JA}$ | Thermal Resistance From Junction To Ambient | 625 | ℃/W |
| $T_j$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature | -55～+150 | ℃ |

## ELECTRICAL CHARACTERISTICS ($T_a$=25℃ unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| **Collector-base breakdown voltage** | $V_{(BR)CBO}$ | $I_C$=50μA, $I_E$=0 | 120 | | | V |
| **Collector-emitter breakdown voltage** | $V_{(BR)CEO}$ | $I_C$=1mA, $I_B$=0 | 120 | | | V |
| **Emitter-base breakdown voltage** | $V_{(BR)EBO}$ | $I_E$=50μA, $I_C$=0 | 5 | | | V |
| **Collector cut-off current** | $I_{CBO}$ | $V_{CB}$=100V, $I_E$=0 | | | 500 | nA |
| **Emitter cut-off current** | $I_{EBO}$ | $V_{EB}$=4V, $I_C$=0 | | | 500 | nA |
| **DC current gain** | $h_{FE}$ | $V_{CE}$=6V, $I_C$=2mA | 180 | | 560 | |
| **Collector-emitter saturation voltage** | $V_{CE(sat)}$ | $I_C$=10mA, $I_B$=1mA | | | 0.5 | V |
| **Transition frequency** | $f_T$ | $V_{CE}$=12V,$I_c$=2mA ,f=100MHz | | 140 | | MHz |
| **Collector output capacitance** | $C_{ob}$ | $V_{CB}$=12V, $I_E$=0, f=1MHz | | 2.5 | | pF |

## CLASSIFICATION OF $h_{FE}$

| RANK | R | S |
|---|---|---|
| **RANGE** | 180－390 | 270－560 |
| **MARKING** | **TR** | **TS** |