

## TRANSISTOR(PNP)

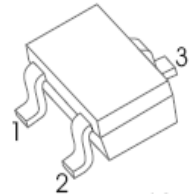
### FEATURES

- High DC Current Gain
- High Voltage and High Current.
- Complementary to 2SC4116
- Small Package

### APPLICATIONS

- General Purpose Amplification.

#### SOT - 323



1. BASE
2. EMITTER
3. COLLECTOR

### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol          | Parameter                                   | Value    | Unit                        |
|-----------------|---------------------------------------------|----------|-----------------------------|
| $V_{CBO}$       | Collector-Base Voltage                      | -50      | V                           |
| $V_{CEO}$       | Collector-Emitter Voltage                   | -50      | V                           |
| $V_{EBO}$       | Emitter-Base Voltage                        | -5       | V                           |
| $I_C$           | Collector Current                           | -150     | mA                          |
| $P_C$           | Collector Power Dissipation                 | 100      | mW                          |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient | 1250     | $^{\circ}\text{C}/\text{W}$ |
| $T_J$           | Junction Temperature                        | 150      | $^{\circ}\text{C}$          |
| $T_{stg}$       | Storage Temperature                         | -55~+150 | $^{\circ}\text{C}$          |

### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter                            | Symbol        | Test conditions                            | Min | Typ | Max  | Unit |
|--------------------------------------|---------------|--------------------------------------------|-----|-----|------|------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C=-100\mu\text{A}, I_E=0$               | -50 |     |      | V    |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C=-1\text{mA}, I_B=0$                   | -50 |     |      | V    |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E=-100\mu\text{A}, I_C=0$               | -5  |     |      | V    |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=-50\text{V}, I_E=0$                |     |     | -100 | nA   |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=-5\text{V}, I_C=0$                 |     |     | -100 | nA   |
| DC current gain                      | $h_{FE}$      | $V_{CE}=-6\text{V}, I_C=-2\text{mA}$       | 70  |     | 400  |      |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=-100\text{mA}, I_B=-10\text{mA}$      |     |     | -0.3 | V    |
| Transition frequency                 | $f_T$         | $V_{CE}=-10\text{V}, I_C=-1\text{mA}$      | 80  |     |      | MHz  |
| Collector output capacitance         | $C_{ob}$      | $V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$ |     |     | 7    | pF   |

### CLASSIFICATION OF $h_{FE}$

| RANK    | O        | Y         | GR(G)     |
|---------|----------|-----------|-----------|
| RANGE   | 70 - 140 | 120 - 240 | 200 - 400 |
| MARKING | SO       | SY        | SG        |