

SOT-323 Plastic-Encapsulate Transistors

2SC1623 TRANSISTOR (NPN)

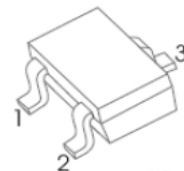
FEATURES

- High DC current gain : $h_{FE}=200(\text{Typ})$ $V_{CE}=6V$, $I_C=1\text{mA}$
- High voltage: $V_{CEO}=50V$

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

| Symbol | Parameter | Value | Unit |
|-----------|-------------------------------|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 60 | V |
| V_{CEO} | Collector-Emitter Voltage | 50 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current -Continuous | 100 | mA |
| P_C | Collector Power Dissipation | 200 | mW |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55-150 | $^\circ\text{C}$ |

SOT-323



1. BASE
2. EMITTER
3. COLLECTOR

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

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|-------------------------------------|-----|-----|-----|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=100\mu\text{A}, I_E=0$ | 60 | | | 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} | $V_{CB}=60V, I_E=0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=5V, I_C=0$ | | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE}=6V, I_C=1\text{mA}$ | 90 | 200 | 600 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$ | | | 0.3 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$ | | | 1 | V |
| Transition frequency | f_T | $V_{CE}=6V, I_C=10\text{mA}$ | | 250 | | MHz |

CLASSIFICATION OF h_{FE}

| Rank | L4 | L5 | L6 | L7 |
|---------|--------|---------|---------|---------|
| Range | 90-180 | 135-270 | 200-400 | 300-600 |
| Marking | L4 | L5 | L6 | L7 |