

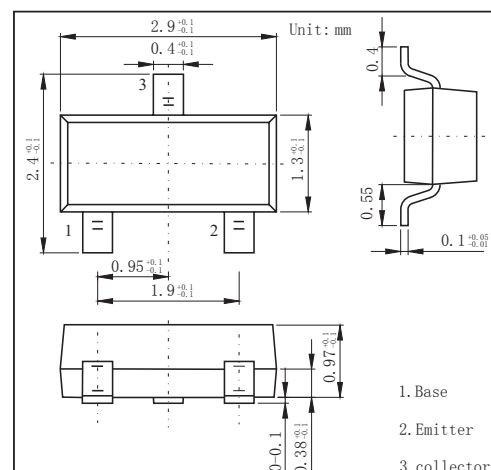
## SOT-23 Plastic-Encapsulate Transistors

### FEATURES

- Collector Current Capability  $I_C=100\text{mA}$
- Collector Emitter Voltage  $V_{CEO}=50\text{V}$
- TRANSISTOR NPN

### MECHANICAL DATA

- Case style:SOT-23molded plastic
- Mounting position:any



### MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

| Parameter                      | Symbol    | Rating     | Unit |
|--------------------------------|-----------|------------|------|
| Collector - Base Voltage       | $V_{CBO}$ | 50         | V    |
| Collector - Emitter Voltage    | $V_{CEO}$ | 50         |      |
| Emitter - Base Voltage         | $V_{EBO}$ | 6          |      |
| Collector Current - Continuous | $I_C$     | 100        | mA   |
| Collector Current - Pulse      | $I_{CP}$  | 200        |      |
| Collector Power Dissipation    | $P_C$     | 150        | mW   |
| Junction Temperature           | $T_J$     | 150        | °C   |
| Storage Temperature Range      | $T_{stg}$ | -55 to 150 |      |

| Parameter                            | Symbol        | Test Conditions                                                          | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--------------------------------------------------------------------------|-----|-----|-----|------|
| Collector- base breakdown voltage    | $V_{CBO}$     | $I_C=100\mu\text{A}, I_E=0$                                              | 50  |     |     | V    |
| Collector- emitter breakdown voltage | $V_{CEO}$     | $I_C=1\text{mA}, I_B=0$                                                  | 50  |     |     |      |
| Emitter - base breakdown voltage     | $V_{EBO}$     | $I_E=100\mu\text{A}, I_C=0$                                              | 6   |     |     |      |
| Collector-base cut-off current       | $I_{CBO}$     | $V_{CB}=50\text{V}, I_E=0$                                               |     |     | 0.1 | uA   |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=6\text{V}, I_C=0$                                                |     |     | 0.1 |      |
| 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   |      |
| DC current gain                      | $h_{FE}$      | $V_{CE}=6\text{V}, I_C=1\text{mA}$                                       | 150 |     | 800 |      |
|                                      |               | $V_{CE}=6\text{V}, I_C=0.1\text{mA}$                                     | 50  |     |     |      |
| Noise figure                         | NF            | $V_{CE}=6\text{V}, I_E=0.1\text{mA}, f=1\text{KHz}, R_G=2\text{K}\Omega$ |     |     | 15  | dB   |
| Collector output capacitance         | $C_{ob}$      | $V_{CB}=6\text{V}, I_E=0, f=1\text{MHz}$                                 |     |     | 4   | pF   |
| Transition frequency                 | $f_T$         | $V_{CE}=6\text{V}, I_C=10\text{mA}$                                      | 180 |     |     | MHz  |

## RATINGS AND CHARACTERISTIC CURVES

