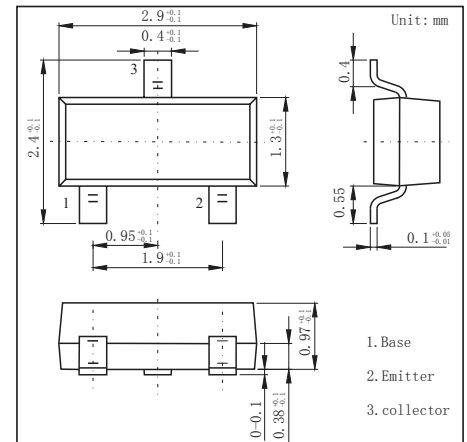


SOT-23 Plastic-Encapsulate Transistors
FEATURES

- Power Dissipation of 300mW
- High Stability and High Reliability
- Epitaxial planar die construction
- NPN General Purpose Amplifier

MECHANICAL DATA

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


MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

| Parameter | Symbol | Rating | Unit |
|---|-----------------|------------|------|
| Collector - Base Voltage | V_{CBO} | 75 | V |
| Collector - Emitter Voltage | V_{CEO} | 40 | |
| Emitter - Base Voltage | V_{EBO} | 6 | |
| Collector Current - Continuous | I_C | 600 | mA |
| Collector Power Dissipation | P_D | 300 | mW |
| Thermal resistance from junction to ambient | $R_{\theta JA}$ | 417 | °C/W |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | |

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---|-----|-----|------|------|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=10\mu A, I_E=0$ | 75 | | | V |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=10mA, I_B=0$ | 40 | | | V |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E=10\mu A, I_C=0$ | 6 | | | V |
| Collector cutoff current | I_{CBO} | $V_{CE}=30V, V_{EB(off)}=3V$ | | | 10 | nA |
| Collector cut-off current | I_{CEX} | $V_{CB}=60V, I_E=0$ | | | 10 | nA |
| Emitter cutoff current | I_{EBO} | $V_{EB}=3V, I_C=0$ | | | 100 | nA |
| DC current gain | h_{FE} | $V_{CE}=10V, I_C=150mA$ | 100 | | 300 | |
| | | $V_{CE}=10V, I_C=0.1mA$ | 40 | | | |
| | | $V_{CE}=10V, I_C=500mA$ | 42 | | | |
| collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500mA, I_B=50mA$ | | | 1.00 | V |
| | | $I_C=150mA, I_B=15mA$ | | | 0.3 | V |
| base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=500mA, I_B=50mA$ | | | 2 | V |
| | | $I_C=150mA, I_B=15mA$ | | | 1.2 | V |
| Transition frequency | f_T | $V_{CE}=20V, I_C=20mA, f=100MHz$ | 300 | | | MHz |
| Delay time | t_d | $V_{CC}=30V, V_{BE(off)}=-0.5V, I_C=150mA, I_{B1}=15mA$ | | | 10 | ns |
| Rise time | t_r | | | | 25 | ns |
| Storage time | t_s | | | | 225 | ns |
| Fall time | t_f | $V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA$ | | | 60 | ns |

RATINGS AND CHARACTERISTIC CURVES

