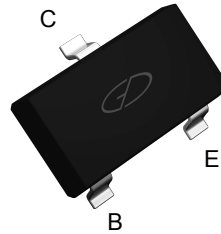


Features

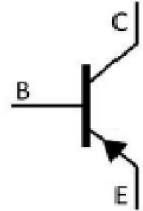
- Low Current
- Low Voltage
- RoHS Compliant

Applications

- For General Purpose Amplifier Applications



Package:SOT-23



Schematic Diagram

Absolute Maximum Ratings (T_A = 25 °C unless otherwise noted)

| Parameter | Symbol | Rating | Unit |
|--------------------------------|------------------|---------|------|
| Collector to Base Voltage | V _{CB0} | -80 | V |
| Collector to Emitter Voltage | V _{CEO} | -65 | V |
| Emitter to Base Voltage | V _{EBO} | -5.0 | V |
| Collector Current - Continuous | I _C | -100 | mA |
| Collector Power Dissipation | P _C | 350 | mW |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature Range | T _{stg} | -55~150 | °C |

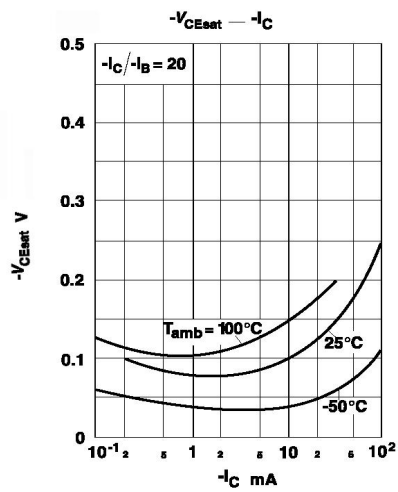
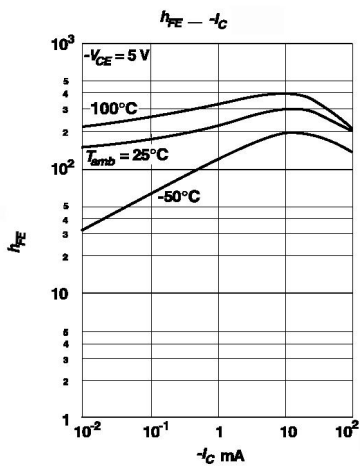
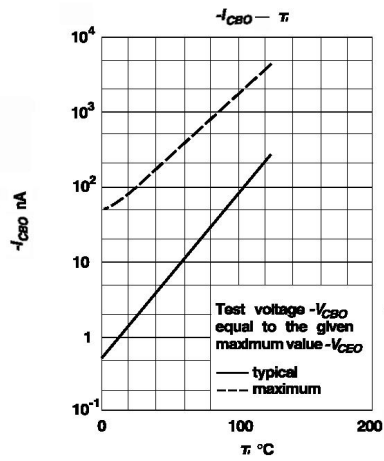
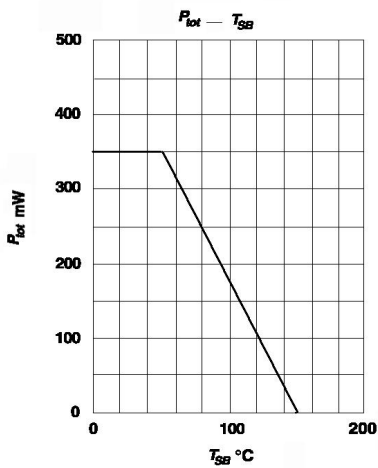
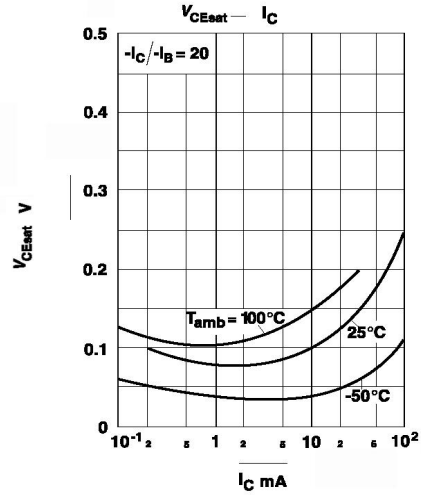
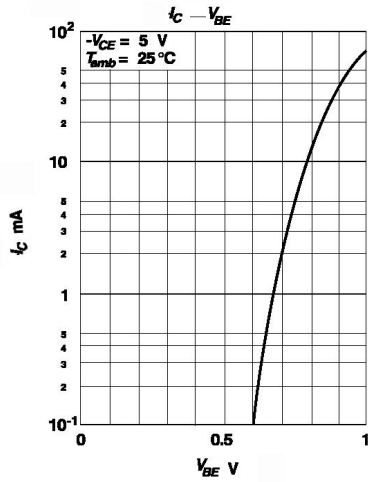
h_{FE} Classifications

| h _{FE} Classifications Symbol | A | B |
|---|---------|---------|
| h _{FE} Range | 125~250 | 220~475 |

Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

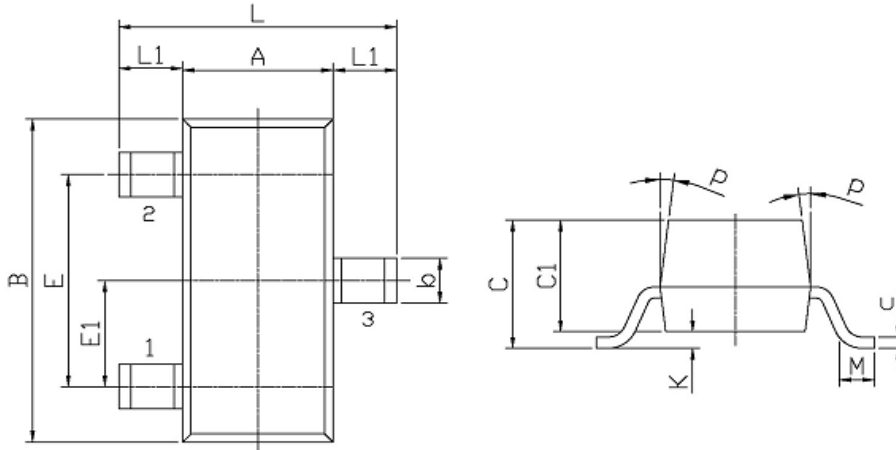
| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--|------------------|---|------|-------|--------|---------------|
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=-30\text{ V}$ $I_E=0$ | | | -0.015 | μA |
| DC Current Gain | h_{FE} | $V_{CE}=-5.0\text{V}$ $I_C=-2.0\text{mA}$ | 125 | | 475 | |
| Collector to Emitter Saturation Voltage ₍₁₎ | $V_{CE(sat)(1)}$ | $I_C=-10\text{mA}$ $I_B=-0.5\text{mA}$ | | -0.09 | -0.3 | V |
| Collector to Emitter Saturation Voltage ₍₂₎ | $V_{CE(sat)(2)}$ | $I_C=-100\text{mA}$ $I_B=-5.0\text{mA}$ | | -0.25 | -0.65 | V |
| Base to Emitter Saturation Voltage ₍₁₎ | $V_{BE(sat)(1)}$ | $I_C=-10\text{mA}$ $I_B=-0.5\text{mA}$ | | -0.7 | | V |
| Base to Emitter Saturation Voltage ₍₂₎ | $V_{BE(sat)(2)}$ | $I_C=-100\text{mA}$ $I_B=-5.0\text{mA}$ | | -0.9 | | V |
| Base to Emitter Voltage _{(ON)1} | $V_{BE(ON)1}$ | $V_{CE}=-5.0\text{V}$ $I_C=-2.0\text{mA}$ | -0.6 | -0.65 | -0.75 | V |
| Base to Emitter Voltage _{(ON)2} | $V_{BE(ON)2}$ | $V_{CE}=-5.0\text{V}$ $I_C=-10\text{mA}$ | | | -0.82 | V |
| Transition Frequency | f_T | $V_{CE}=-5.0\text{V}$ $f=100\text{MHz}$ $I_C=10\text{mA}$ | | 150 | | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB}=-10\text{V}$ $f=1.0\text{MHz}$ $I_E=0$ | | 4.5 | | pF |
| Noise Figure | NF | $V_{CE}=-6.0\text{V}$ $R_g=2\text{K}\Omega$ $I_C=-0.1\text{mA}$ $f=1.0\text{KHz}$ | | 2.0 | 10 | dB |

Electrical Characteristic Curve



Package Dimensions

SOT-23



| Symbol | Dimensions In Millimeters | | Symbol | Dimensions In Millimeters | |
|--------|---------------------------|------|--------|---------------------------|------|
| | Min | Max | | Min | Max |
| L | 2.2 | 2.7 | C | 1.30Max | |
| L1 | 0.45 | 0.65 | C1 | 0.90 | 1.20 |
| A | 1.15 | 1.50 | c | 0.05 | 0.20 |
| B | 2.70 | 3.10 | K | 0 | 0.10 |
| E | 1.70 | 2.10 | M | 0.20MIN | |
| E1 | 0.85 | 1.05 | P | 7° | |
| b | 0.35 | 0.55 | | | |