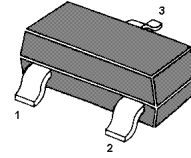


NPN Silicon Epitaxial Planar Transistor

For switching and AF amplifier applications.

The transistor is subdivided into four groups O, Y, G and L, according to its DC current gain.



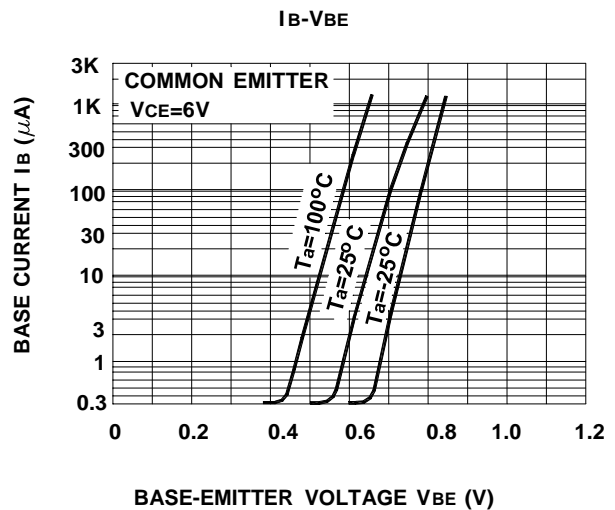
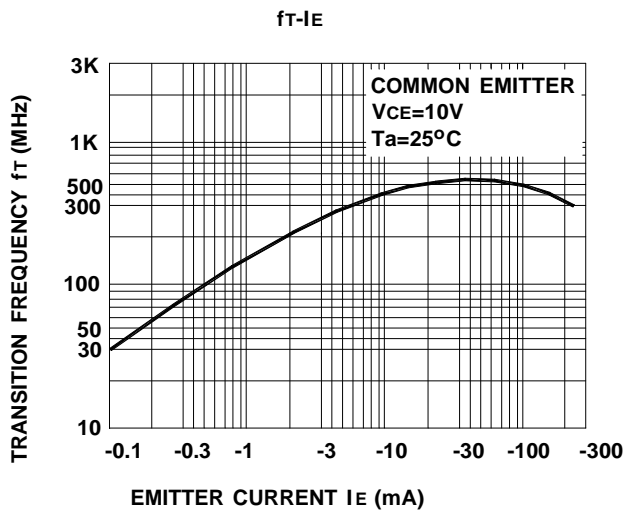
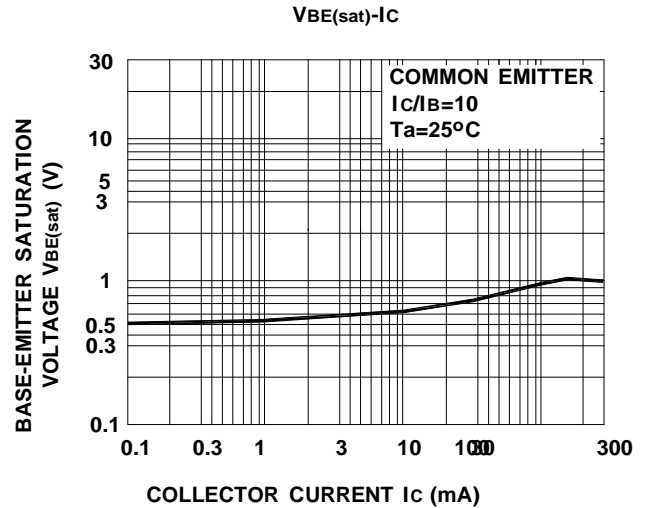
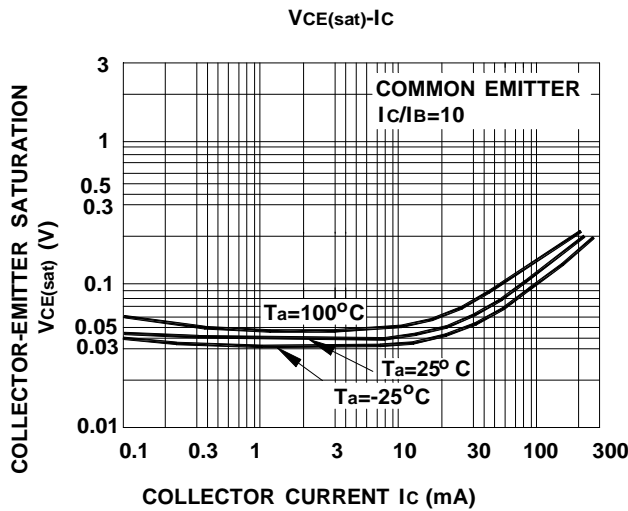
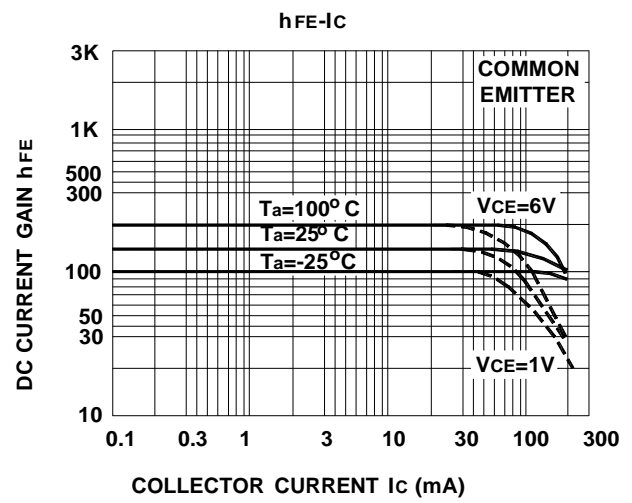
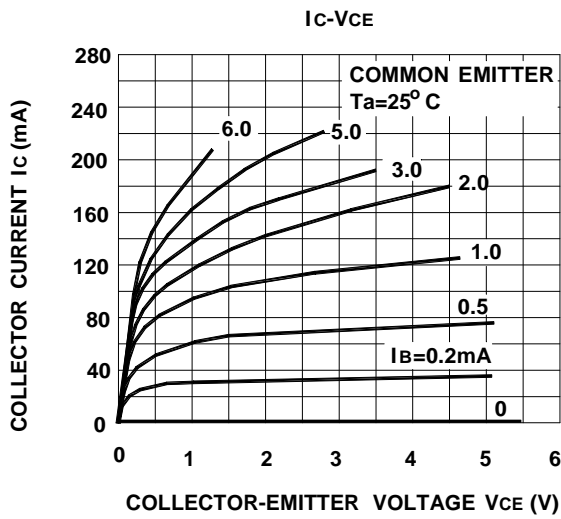
1.Base 2.Emitter 3.Collector
SOT-23 Plastic Package

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

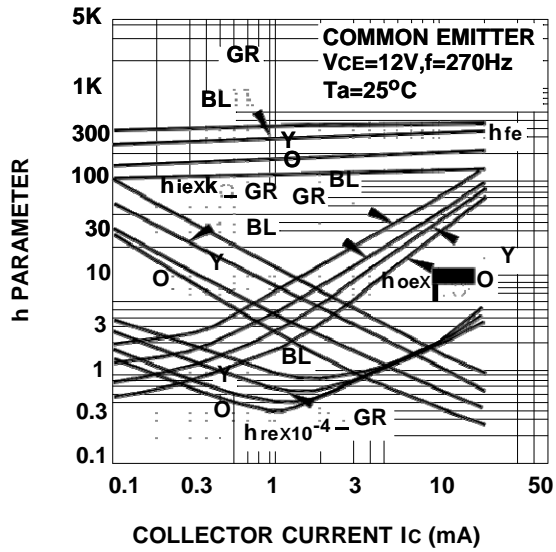
| | Symbol | Value | Unit |
|---------------------------|-----------|-------------|------------------|
| Collector Base Voltage | V_{CBO} | 60 | V |
| Collector Emitter Voltage | V_{CEO} | 50 | V |
| Emitter Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 150 | mA |
| Base Current | I_B | 30 | mA |
| Power Dissipation | P_{tot} | 200 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_s | -55 to +150 | $^\circ\text{C}$ |

Characteristics at $T_{amb}=25\text{ }^\circ\text{C}$

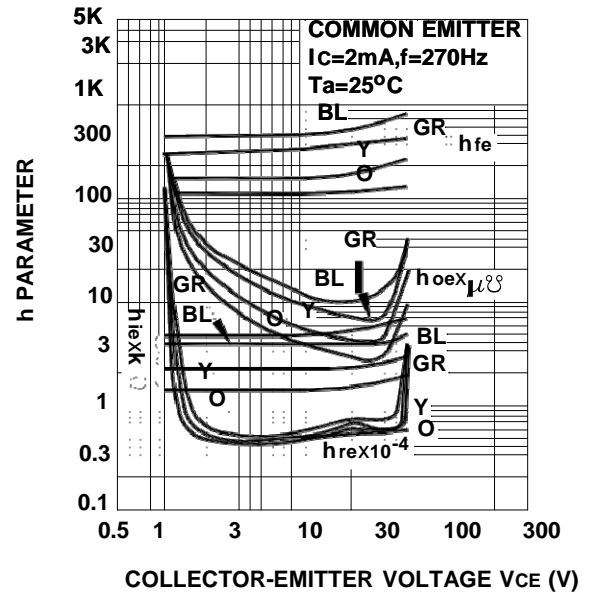
| | Symbol | Min. | Typ. | Max. | Unit |
|---|---------------|------|------|------|---------------|
| DC Current Gain at $V_{CE}=6\text{V}$, $I_C=2\text{mA}$ | | | | | |
| Current Gain Group O | h_{FE} | 70 | - | 140 | - |
| Y | h_{FE} | 120 | - | 240 | - |
| G | h_{FE} | 200 | - | 400 | - |
| L | h_{FE} | 300 | - | 700 | - |
| Collector Emitter Saturation Voltage at $I_C=100\text{mA}$, $I_B=10\text{mA}$ | $V_{CE(sat)}$ | - | - | 0.25 | V |
| Collector Cutoff Current at $V_{CB}=60\text{V}$ | I_{CBO} | - | - | 0.1 | μA |
| Emitter Cutoff Current at $V_{EB}=5\text{V}$ | I_{EBO} | - | - | 0.1 | μA |
| Transition Frequency at $V_{CE}=10\text{V}$, $I_C=1\text{mA}$ | f_T | 80 | - | - | MHz |
| Collector Output Capacitance at $V_{CB}=10\text{V}$, $f=1\text{MHz}$ | C_{OB} | - | 2 | 3.5 | pF |
| Noise Figure at $V_{CE}=6\text{V}$, $I_C=0.1\text{mA}$, $f=1\text{KHz}$, $R_G=10\text{K}\Omega$ | NF | - | 1 | 10 | dB |



h PARAMETER- I_C



h PARAMETER- V_{CE}



Pc-Ta

