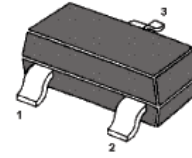


**PNP Silicon Epitaxial Planar Transistor**

for high current application

The transistor is subdivided into three groups F, G and H according to its DC current gain.



1.BASE 2.EMITTER 3.COLLECTOR  
SOT-23 Plastic Package

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

| Parameter                 | Symbol     | Value         | Unit             |
|---------------------------|------------|---------------|------------------|
| Collector Base Voltage    | $-V_{CBO}$ | 60            | V                |
| Collector Emitter Voltage | $-V_{CEO}$ | 45            | V                |
| Emitter Base Voltage      | $-V_{EBO}$ | 5             | V                |
| Collector Current         | $-I_C$     | 800           | mA               |
| Peak Collector Current    | $-I_{CM}$  | 1             | A                |
| Base Current              | $-I_B$     | 100           | mA               |
| Peak Base Current         | $-I_{BM}$  | 200           | 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  $T_a = 25\text{ }^\circ\text{C}$** 

| Parameter  | Symbol | Min.           | Typ. | Max. | Unit |     |
|--|--------|----------------|------|------|------|-----|
| DC Current Gain<br>at $-V_{CE} = 10\text{ V}$ , $-I_C = 100\text{ }\mu\text{A}$<br><br>at $-V_{CE} = 1\text{ V}$ , $-I_C = 10\text{ mA}$<br><br>at $-V_{CE} = 1\text{ V}$ , $-I_C = 100\text{ mA}$<br><br>at $-V_{CE} = 2\text{ V}$ , $-I_C = 500\text{ mA}$ | F      | $h_{FE}$       | 35   | -    | -    | -   |
|  | G      | $h_{FE}$       | 50   | -    | -    | -   |
|  | H      | $h_{FE}$       | 80   | -    | -    | -   |
|  | F      | $h_{FE}$       | 75   | -    | -    | -   |
|  | G      | $h_{FE}$       | 120  | -    | -    | -   |
|  | H      | $h_{FE}$       | 180  | -    | -    | -   |
|  | F      | $h_{FE}$       | 100  | -    | 250  | -   |
|  | G      | $h_{FE}$       | 160  | -    | 400  | -   |
|  | H      | $h_{FE}$       | 250  | -    | 630  | -   |
| Collector Cutoff Current<br>at $-V_{CB} = 45\text{ V}$   |        | $-I_{CBO}$     | -    | -    | 20   | nA  |
|  |        | $-I_{EBO}$     | -    | -    | 20   | nA  |
|  |        | $-V_{(BR)CBO}$ | 60   | -    | -    | V   |
| Collector Emitter Breakdown Voltage<br>at $-I_C = 10\text{ }\mu\text{A}$   |        | $-V_{(BR)CEO}$ | 45   | -    | -    | V   |
| Emitter Base Breakdown Voltage<br>at $-I_E = 10\text{ }\mu\text{A}$  |        | $-V_{(BR)EBO}$ | 5    | -    | -    | V   |
| Collector Emitter Saturation Voltage<br>at $-I_C = 100\text{ mA}$ , $-I_B = 10\text{ mA}$  |        | $-V_{CE(sat)}$ | -    | -    | 0.3  | V   |
| Collector Emitter Saturation Voltage<br>at $-I_C = 500\text{ mA}$ , $-I_B = 50\text{ mA}$  |        | $-V_{CE(sat)}$ | -    | -    | 0.7  | V   |
| Base Emitter Saturation Voltage<br>at $-I_C = 100\text{ mA}$ , $-I_B = 10\text{ mA}$   |        | $-V_{BE(sat)}$ | -    | -    | 1.25 | V   |
| Base Emitter Saturation Voltage<br>at $-I_C = 500\text{ mA}$ , $-I_B = 50\text{ mA}$   |        | $-V_{BE(sat)}$ | -    | -    | 2    | V   |
| Transition Frequency<br>at $-V_{CE} = 5\text{ V}$ , $-I_C = 50\text{ mA}$ , $f = 100\text{ MHz}$   |        | $f_T$          | -    | 200  | -    | MHz |
| Collector Base Capacitance<br>at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$  |        | $C_{ob}$       | -    | 6    | -    | pF  |
| Emitter Base Capacitance<br>at $-V_{BE} = 0.5\text{ V}$ , $f = 1\text{ MHz}$   |        | $C_{eb}$       | -    | 60   | -    | pF  |