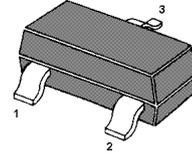


PNP Silicon Epitaxial Planar Transistor

for low frequency amplification applications

The transistor is subdivided into two groups E and F, according to its DC current gain.

MARKING: hFE(E):ME
hFE(F):MF



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 | $-V_{CEO}$ | 50 | V |
| Emitter Base Voltage | $-V_{EBO}$ | 6 | V |
| Collector Current | $-I_C$ | 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 at $-V_{CE} = 6\text{ V}$, $-I_C = 1\text{ mA}$ Current Gain Group at $-V_{CE} = 6\text{ V}$, $-I_C = 0.1\text{ mA}$ | E h_{FE} | 150 | - | 300 | - |
| | F h_{FE} | 250 | - | 500 | - |
| | h_{FE} | 90 | - | - | - |
| Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$ | $-V_{(BR)CBO}$ | 60 | - | - | V |
| Collector Emitter Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$ | $-V_{(BR)CEO}$ | 50 | - | - | V |
| Emitter Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$ | $-V_{(BR)EBO}$ | 6 | - | - | V |
| Collector Cutoff Current at $-V_{CB} = 48\text{ V}$ | $-I_{CBO}$ | - | - | 0.1 | μA |
| Emitter Cutoff Current at $-V_{EB} = 6\text{ V}$ | $-I_{EBO}$ | - | - | 0.1 | μA |
| Collector Emitter Saturation Voltage at $-I_C = 100\text{ mA}$, $-I_B = 10\text{ mA}$ | $-V_{CE(sat)}$ | - | - | 0.3 | V |
| Base Emitter Saturation Voltage at $-I_C = 100\text{ mA}$, $-I_B = 10\text{ mA}$ | $-V_{BE(sat)}$ | - | - | 1 | V |
| Gain Bandwidth Product at $-V_{CE} = 6\text{ V}$, $-I_C = 10\text{ mA}$ | f_T | - | 200 | - | MHz |
| Collector Output Capacitance at $-V_{CB} = 6\text{ V}$, $f = 1\text{ MHz}$ | C_{ob} | - | 4 | - | pF |
| Noise Figure at $-V_{CE} = 6\text{ V}$, $I_E = 0.3\text{ mA}$, $f = 100\text{ Hz}$, $R_G = 10\text{ K}\Omega$ | NF | - | - | 20 | dB |

