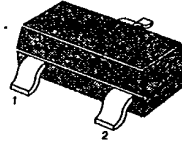


MMBT4124**NPN EPITAXIAL SILICON TRANSISTOR****GENERAL PURPOSE TRANSISTOR****ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)**

| Characteristic | Symbol | Rating | Unit |
|---------------------------|-----------|--------|------------------|
| Collector-Base Voltage | V_{CB0} | 30 | V |
| Collector-Emitter Voltage | V_{CE0} | 25 | V |
| Emitter-Base Voltage | V_{EB0} | 5 | V |
| Collector Current | I_C | 200 | mA |
| Collector Dissipation | P_C | 350 | mW |
| Storage Temperature | T_{stg} | 150 | $^\circ\text{C}$ |

• Refer to MMBT3904 for graphs

SOT-23



1. Base 2. Emitter 3. Collector

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

| Characteristic | Symbol | Test Condition | Min | Max | Unit |
|---------------------------------------|---------------|---|-----|------|------|
| Collector-Base Breakdown Voltage | BV_{CB0} | $I_C = 10\mu\text{A}, I_E = 0$ | 30 | | V |
| *Collector-Emitter Breakdown Voltage | BV_{CE0} | $I_C = 1.0\text{mA}, I_B = 0$ | 25 | | V |
| Emitter-Base Breakdown Voltage | BV_{EB0} | $I_E = 10\mu\text{A}, I_C = 0$ | 5 | | V |
| Collector Cutoff Current | I_{CB0} | $V_{CB} = 20\text{V}, I_E = 0$ | | 50 | nA |
| Emitter Cutoff Current | I_{EB0} | $V_{EB} = 3\text{V}, I_C = 0$ | | 50 | nA |
| *DC Current Gain | h_{FE} | $V_{CE} = 1\text{V}, I_C = 2\text{mA}$ | 120 | 360 | |
| | | $V_{CE} = 1\text{V}, I_C = 50\text{mA}$ | 60 | | |
| *Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 50\text{mA}, I_B = 5.0\text{mA}$ | | 0.3 | V |
| *Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = 50\text{mA}, I_B = 5.0\text{mA}$ | | 0.95 | V |
| Current Gain-Bandwidth Product | f_T | $I_C = 10\text{mA}, V_{CE} = 20\text{V}$ $f = 100\text{MHz}$ | 300 | | MHz |
| Output Capacitance | C_{ob} | $V_{CB} = 5\text{V}, I_E = 0$ $f = 1.0\text{MHz}$ | | 4 | pF |
| Noise Figure | NF | $I_C = 100\mu\text{A}, V_{CE} = 5\text{V}$ $R_S = 1\text{K}\Omega$ $f = 10\text{Hz to } 15.7\text{KHz}$ | | 5 | dB |

* Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Marking

