

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	$^\circ\text{C}$

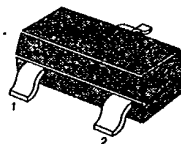
• Refer to MMBT3904 for graphs

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_{CBO}	$V_{CB} = 20\text{V}$, $I_E = 0$		50	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 3\text{V}$, $I_C = 0$		50	nA
*DC Current Gain	h_{FE}	$V_{CE} = 1\text{V}$, $I_C = 2\text{mA}$ $V_{CE} = 1\text{V}$, $I_C = 50\text{mA}$	120 60	360	
*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 $\leq 2\%$

SOT-23



1. Base 2. Emitter 3. Collector

Marking

