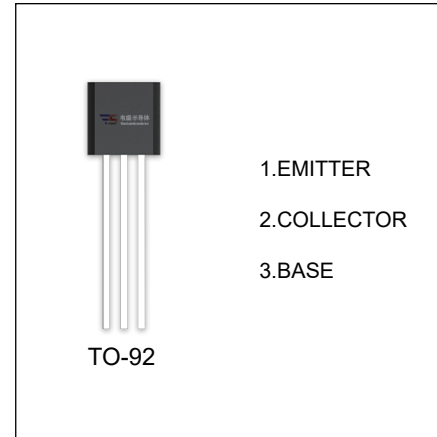


## M8050 TRANSISTOR (NPN)

- FEATURES**

Power Dissipation



### ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
M8050	TO-92	Bulk	1000pcs/Bag
M8050-TA	TO-92	Tape	2000pcs/Box

### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	40	V
V <sub>CEO</sub>	Collector-Emitter Voltage	25	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>c</sub>	Collector Current -Continuous	800	mA
P <sub>c</sub>	Collector Power Dissipation	625	mW
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55~+150	°C

$T_a=25\text{ }^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	40		V
Collector-emitter breakdown voltage	$V_{(BR)CEO^*}$	$I_C=1\text{mA}, I_B=0$	25		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	6		V
Collector cut-off current	$I_{CBO}$	$V_{CB}=35\text{V}, I_E=0$		0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE}=20\text{V}, I_B=0$		0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=1\text{V}, I_C=5\text{mA}$	45		
	$h_{FE(2)}$	$V_{CE}=1\text{V}, I_C=100\text{mA}$	80	400	
	$h_{FE(3)}$	$V_{CE}=1\text{V}, I_C=800\text{mA}$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=800\text{mA}, I_B=80\text{mA}$		0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=800\text{mA}, I_B=80\text{mA}$		1.2	V
Transition frequency	$f_T$	$V_{CE}=6\text{V}, I_C=20\text{mA}, f=30\text{MHz}$	150		MHz

\* Pulse Test : pulse width  $\leq 300\mu\text{s}$  , duty cycle  $\leq 2\%$ .

#### CLASSIFICATION OF $h_{FE(2)}$

Rank	B	C	D	D3
Range	80-160	120-200	160-300	300-400

# Typical Characteristics

# M8050

