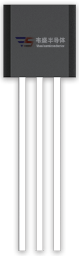
M8050S TRANSISTOR (NPN)

- **FEATURES**
  Power Dissipation



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
M8050S	TO-92	Bulk	1000pcs/Bag
M8050S-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	800	mA
P_C	Collector Power Dissipation	625	mW
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

T_a=25℃ unless otherwise specified

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

* Pulse Test : pulse width ≤ 300μs , duty cycle ≤2%.

CLASSIFICATION OF $h_{FE(2)}$

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