



DATA SHEET

SEMICONDUCTOR

M8050

TRANSISTOR (NPN)



FEATURES

Power dissipation

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

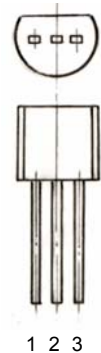
Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	40	V
V _{CEO}	Collector-Emitter Voltage	25	V
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current -Continuous	800	mA
P _C	Collector Power Dissipation	625	mW
T _J	Junction Temperature	125	°C
T _{stg}	Storage Temperature	-55-125	°C

TO-92

1.EMITTER

2. BASE

3. COLLECTOR



ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

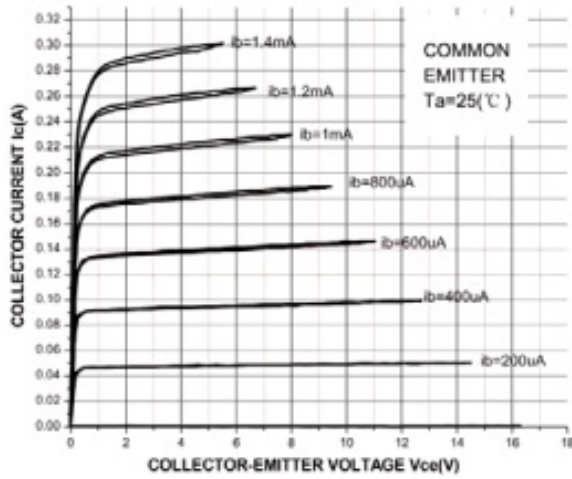
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 100μA, I _E =0	40		V
Collector-emitter breakdown voltage	V _{(BR)CEO*}	I _C = 1mA, I _B =0	25		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 100μA, I _C =0	6		V
Collector cut-off current	I _{CBO}	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%.

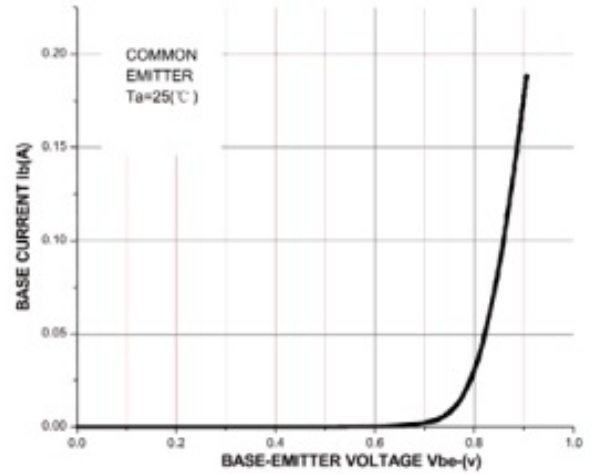
DEVICE CHARACTERISTICS

M8050

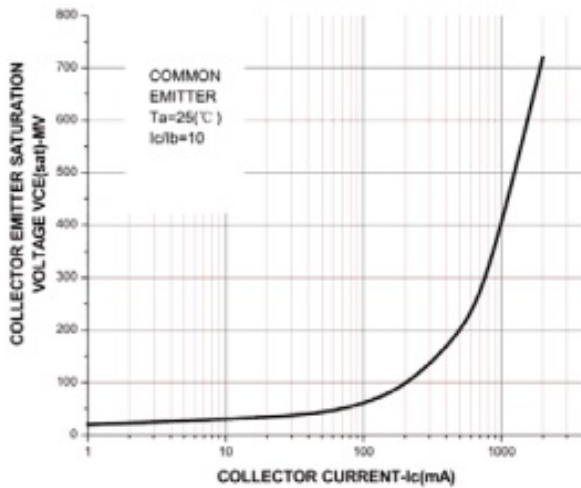
I_c - V_{ce}



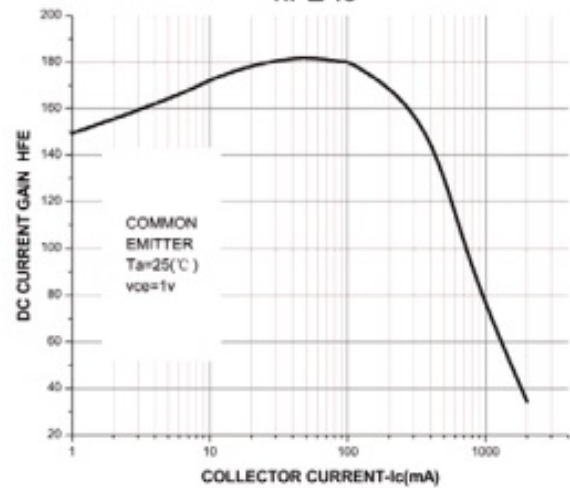
I_b - V_{be}



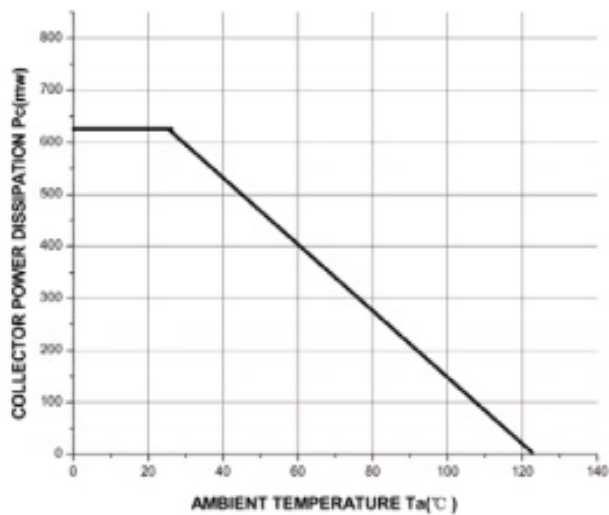
$V_{ce(sat)}$ - I_c



h_{FE} - I_c



P_c - T_a



PACKAGE OUTLINE & DIMENSIONS

M8050

TO-92

Unit: inch (mm)

