



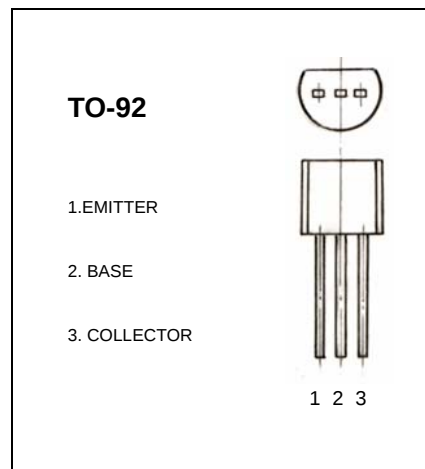
TO-92 Plastic-Encapsulate Transistors

M8050 TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM} : 625 \text{ m W (Tamb=25}^{\circ}\text{C)}$$



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
T _J , T _{stg}	Junction and Storage Temperature	-55-150	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

ELECTRICAL CHARACTERISTICS(Tamb=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 = 0.1mA , 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%.

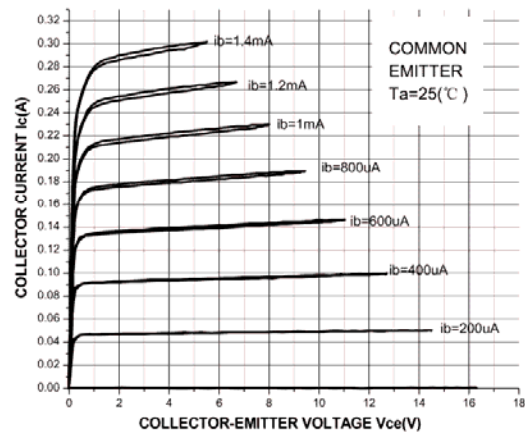
CLASSIFICATION OF h_{FE(2)}

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

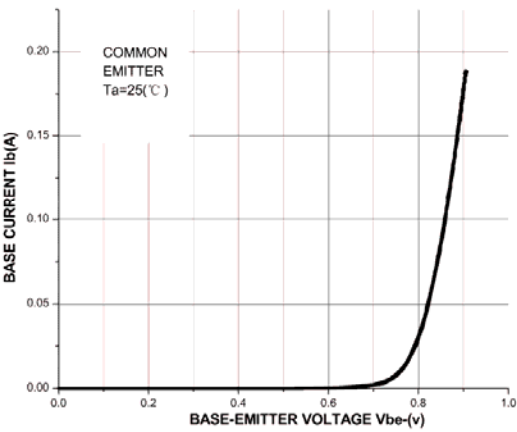
Typical Characteristics

M8050

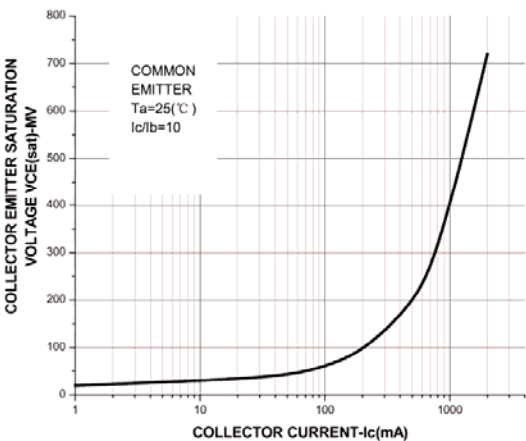
Ic-Vce



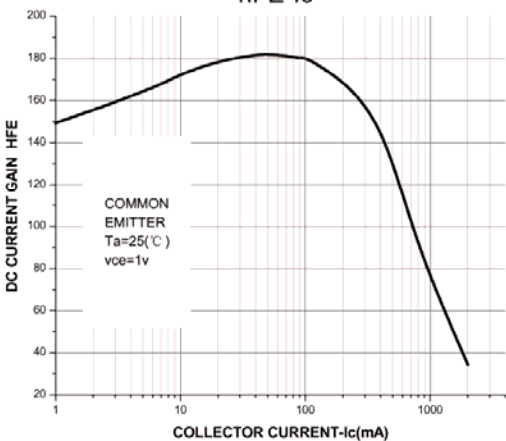
Ib-Vbe



Vcesat-Ic



hFE-Ic



Pc-Ta

