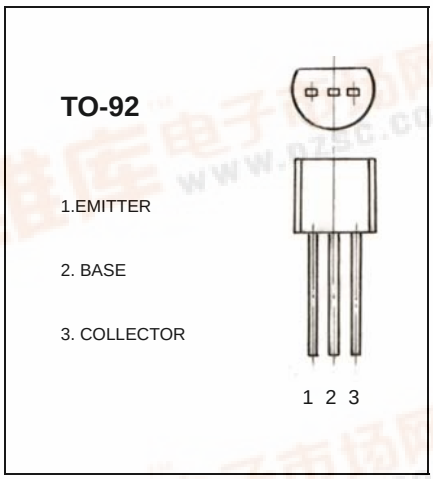
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92 Plastic-Encapsulate Transistors

M8050 TRANSISTOR (NPN)



FEATURES

Power dissipation

P_{CM} : 625 m W(Tamb=25℃)

MAXIMUM RATINGS* T_A=25℃ 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	℃

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

ELECTRICAL CHARACTERISTICS(Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	Ic= 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%.

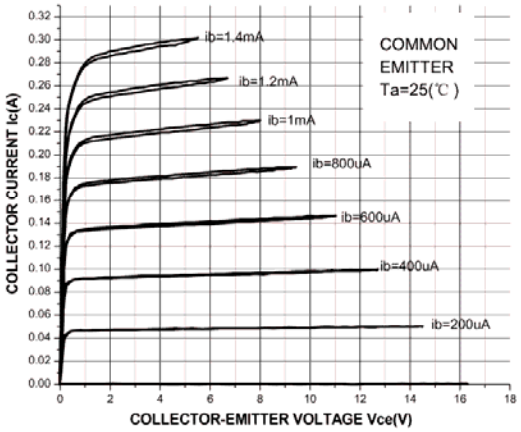
CLASSIFICATION OF $h_{FE(2)}$

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

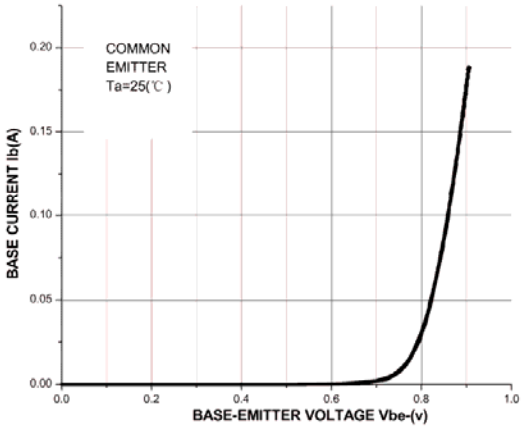
Typical Characteristics

M8050

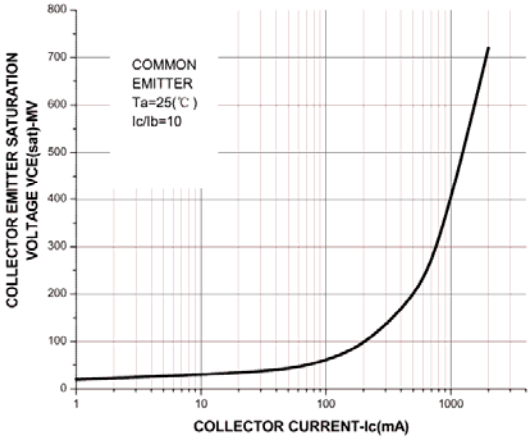
Ic-Vce



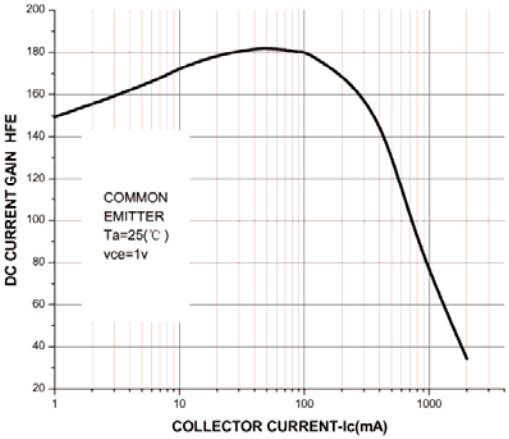
Ib-Vbe



Vcesat-Ic



hFE-Ic



Pc-Ta