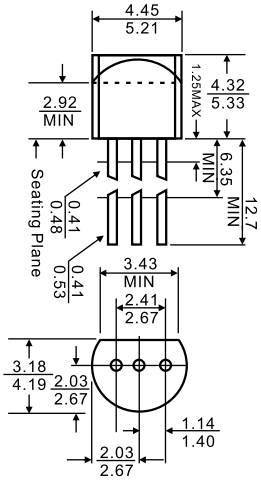
M8050(NPN)

TO-92 Transistors

1. EMITTER
2. BASE
3. COLLECTOR

TO-92



Dimensions in inches and (millimeters)

Features

✧ Power dissipation

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
P_C	Collector Power Dissipation	625	mW
T_J	Junction Temperature	125	℃
T_{stg}	Storage Temperature	-55-125	℃

ELECTRICAL CHARACTERISTICS (Tamb=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%.

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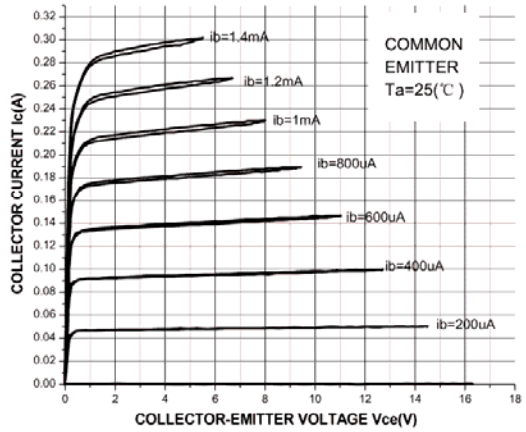
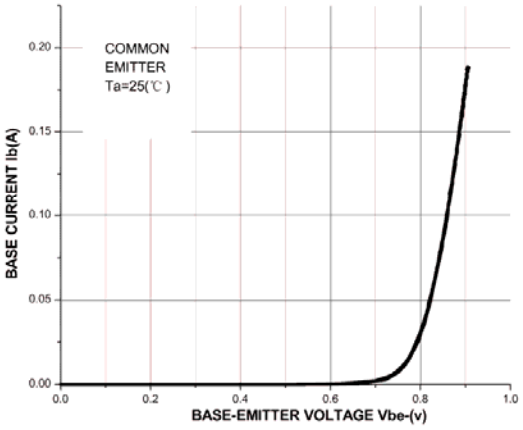
Typical Characteristics

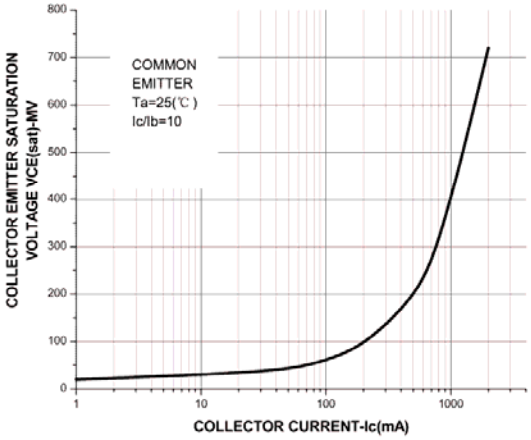
Ic-Vce



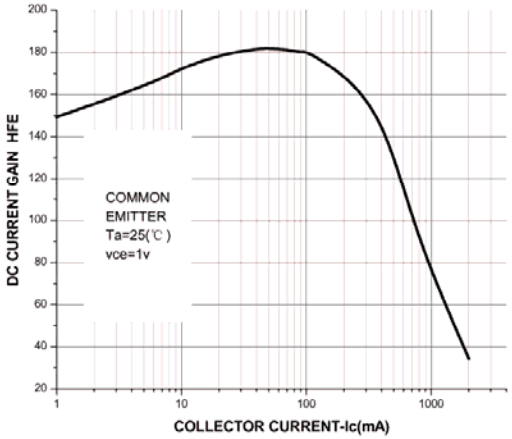
Ib-Vbe



Vcesat-Ic



hFE-Ic



Pc-Ta