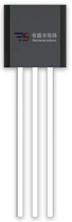
8050SS TRANSISTOR (NPN)

FEATURES

- General Purpose Switching and Amplification.



1.EMITTER

2.COLLECTOR

3.BASE

TO-92

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
8050SS	TO-92	Bulk	1000pcs/Bag
8050SS-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	5	V
I_C	Collector Current	1.5	A
P_C	Collector Power Dissipation	1	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	125	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

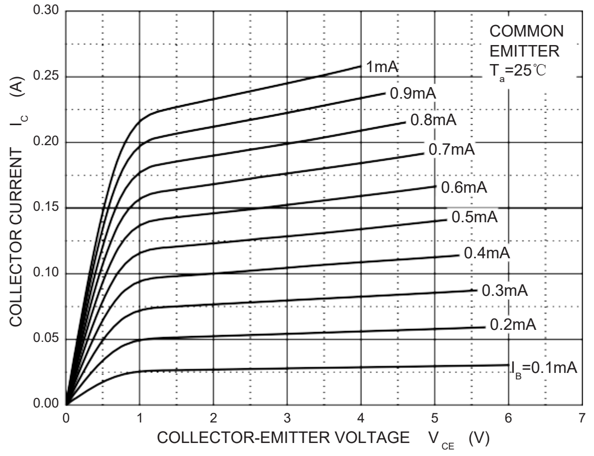
T_a=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 0.1mA,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=0.1mA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=40V,I_E=0			0.1	μA
Collector cut-off current	I_{CEO}	V_{CE}=20V,I_B=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=1V, I_C=100mA	85		300	
	$h_{FE(2)}$	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
Base-emitter voltage	V_{BE}	V_{CE}=1V, I_C=10mA			1.0	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0, f=1MHz			15	pF
Transition frequency	f_T	VCE=10V,IC= 50mA, f=30MHz	100			MHz

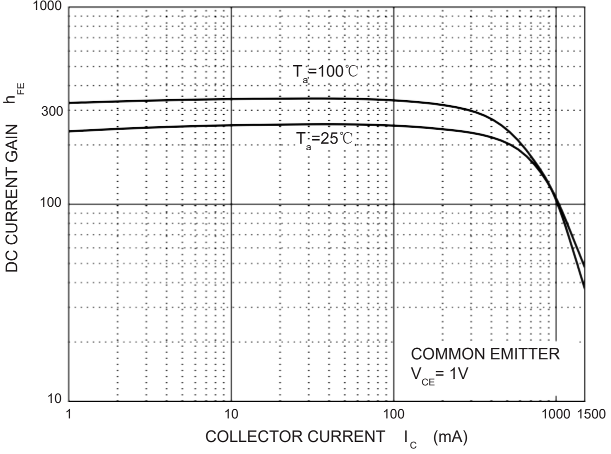
CLASSIFICATION OF $h_{FE(1)}$

RANK	B	C	D
RANGE	85-160	120-200	160-300

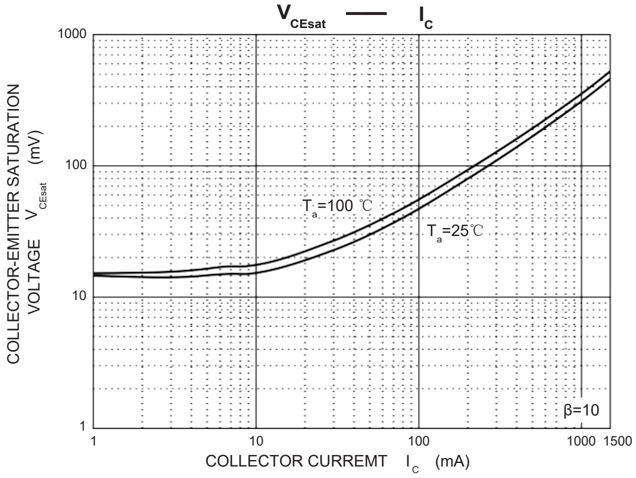
Static Characteristic



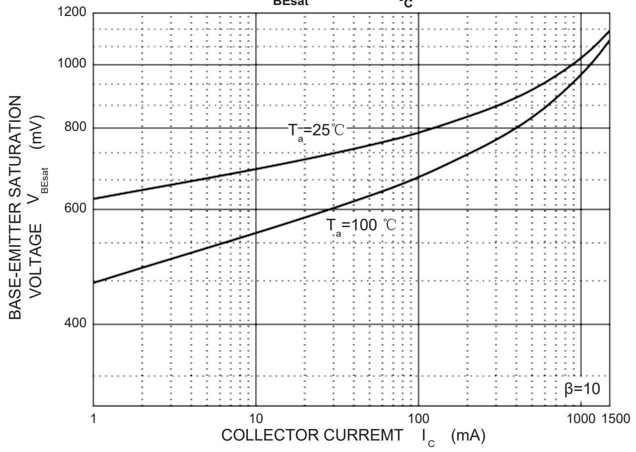
h_{FE} — I_C



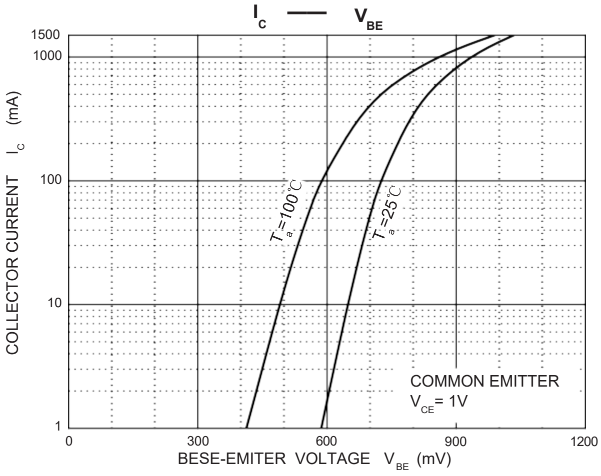
V_{CEsat} — I_C



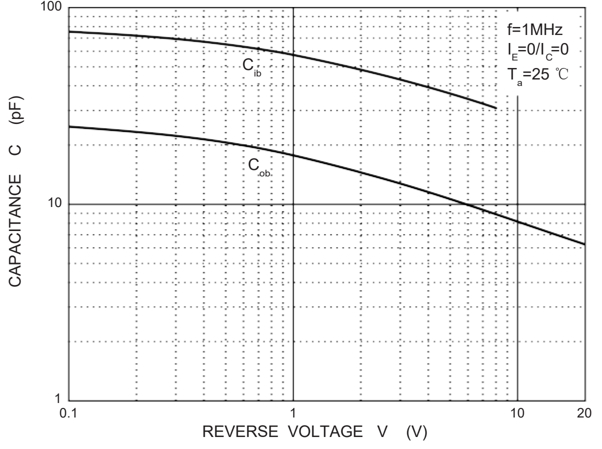
V_{BEsat} — I_C



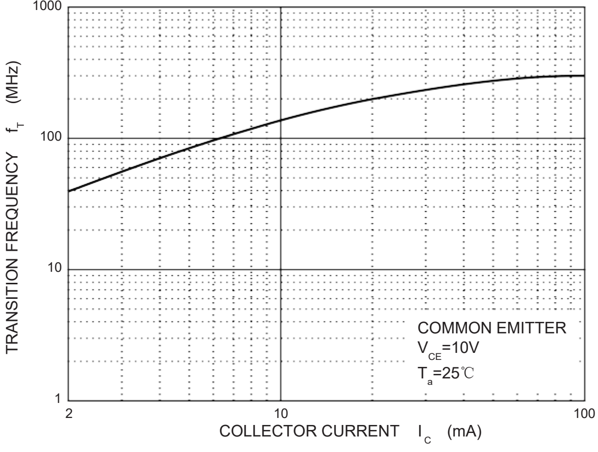
I_C — V_{BE}



C_{ob}/C_{ib} — V_{CB}/V_{EB}



f_T — I_C



P_C — T_a