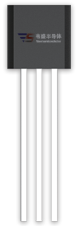
3DD13002B TRANSISTOR（NPN）

FEATURE

- Power Switching Applications



1.EMITTER

2.COLLECTOR

3.BASE

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
3DD13002B	TO-92	Bulk	1000pcs/Bag
3DD13002B-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

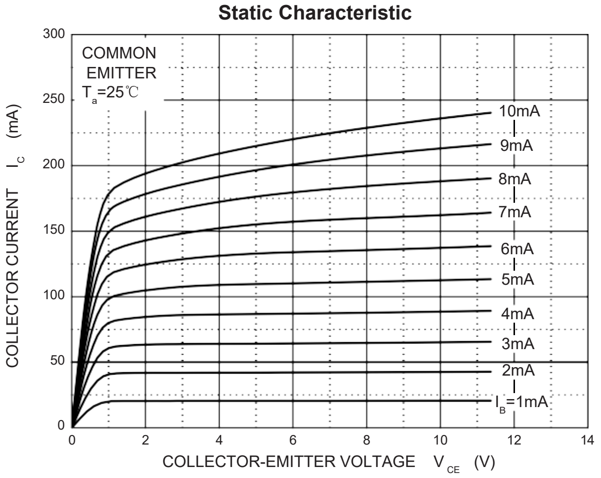
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	0.8	A
P_C	Collector Power Dissipation	0.9	W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55～150	℃

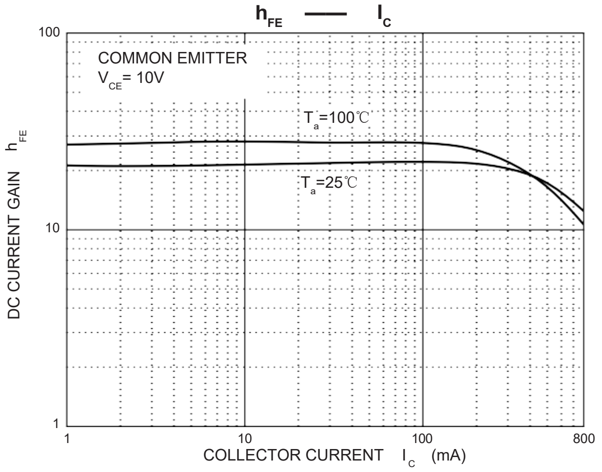
T_a=25 ℃ unless otherwise specified

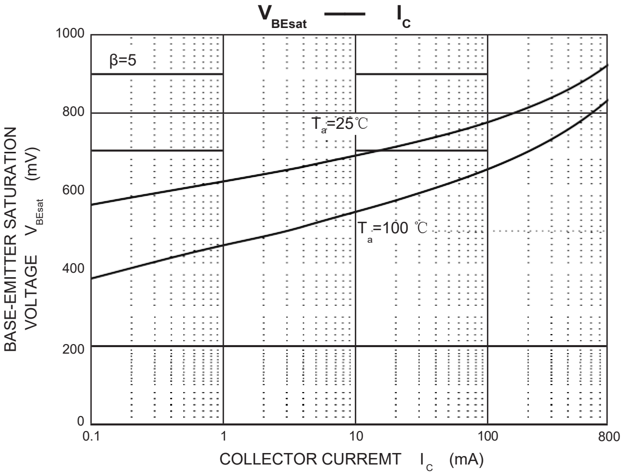
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	600			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 100μA,I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}= 600V,I_E=0			100	μA
	I_{CEO}	V_{CE}= 400V,I_B=0			100	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 6 V, I_C=0			100	μA
Dc current gain	h_{FE1}	V_{CE}= 10 V, I_C=200mA	9		40	
	h_{FE2}	V_{CE}= 10 V, I_C=0.25mA	5			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=200mA, I_B=40mA			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=200mA, I_B=40mA			1.1	V
Transition frequency	f_T	V_{CE}=10V, I_C=100mA f =1MHz	5			MHz
Fall time	t_f	I_C=1A, I_{B1}=-I_{B2}=0.2A V_{CC}=100V			0.5	μs
Storage time	t_s				2.5	μs

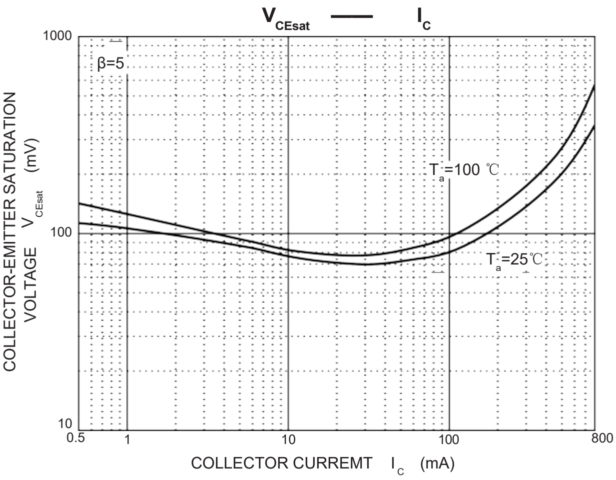
CLASSIFICATION OF h_{FE1}

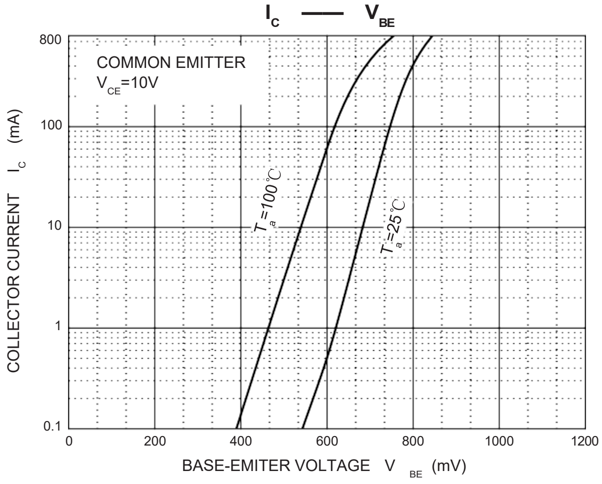
Range	9-15	15-20	20-25	25-30	30-35	35-40

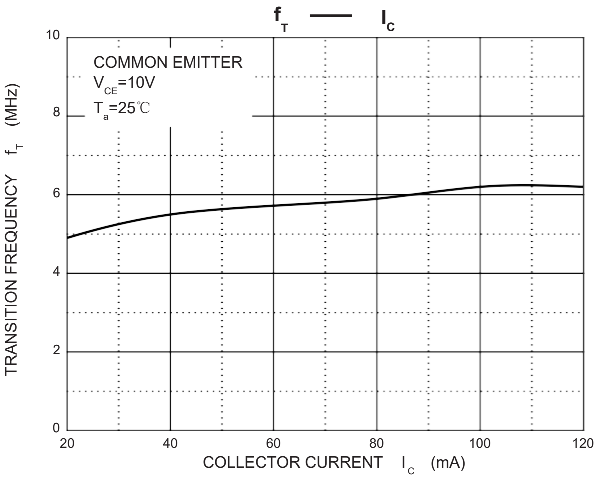

Static Characteristic

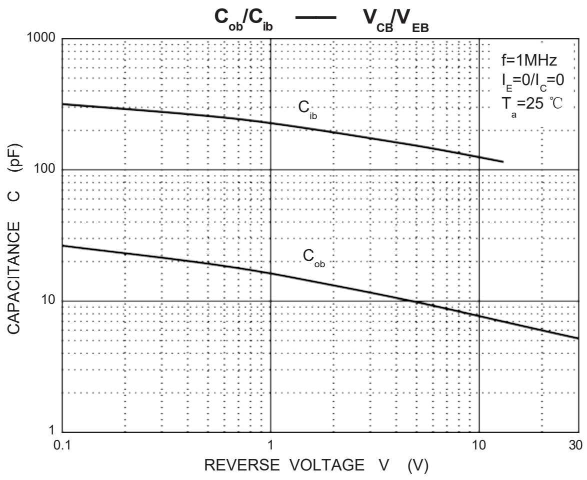

h_{FE} — I_C

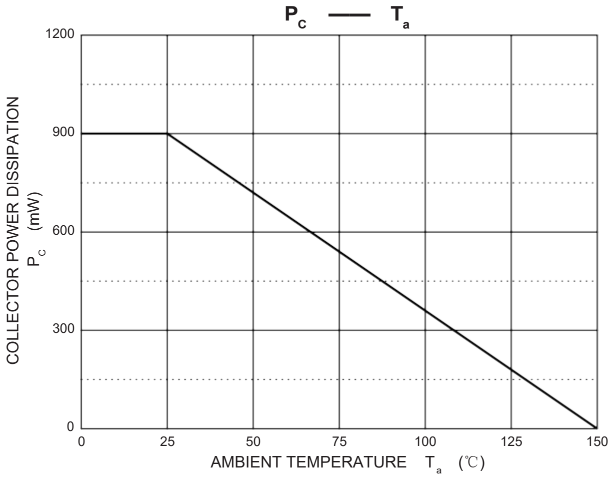

V_{BEsat} — I_C


V_{CEsat} — I_C


I_C — V_{BE}


f_T — I_C


C_{ob}/C_{ib} — V_{CB}/V_{EB}


P_C — T_a