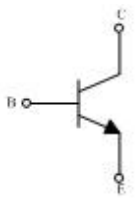
3DD13002 TRANSISTOR (NPN)


TO-252 TO-251

1.BASE
2.COLLECTOR
3.EMITTER



FEATURE

· power switching applications

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	1	A
P_C	Collector Power Dissipation	1.25	W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~150	℃

ELECTRICAL CHARACTERISTICS (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_{CB}= 400V, I_E=0			100	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 7V, 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