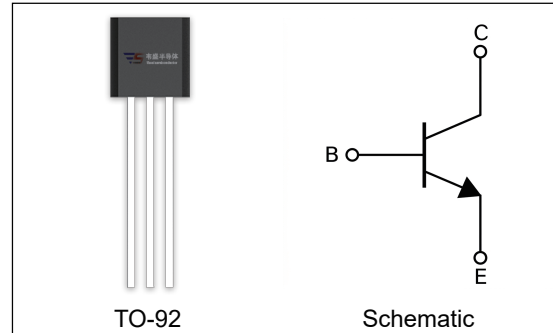


13003B

TRANSISTOR(NPN)

FEATURES

- * power switching applications



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	700	V
V _{CEO}	Collector-Emitter Voltage	400	V
V _{EBO}	Emitter-Base Voltage	9	V
I _C	Collector Current -Continuous	1.5	A
P _C	Collector Power Dissipation	0.9	W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55 ~150	°C

T_a=25 °C unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 1mA, I_E = 0$	700			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 1mA, I_C = 0$	9			V
Collector cut-off current	I_{CBO}	$V_{CB} = 700V, I_E = 0$			100	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 400V, I_B = 0$			50	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 7V, I_C = 0$			10	μA
DC current gain	h_{FE}	$V_{CE} = 10V, I_C = 0.4 A$	20		40	
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C = 1.5A, I_B = 0.5A$			3	V
	$V_{CE(sat)2}$	$I_C = 0.5A, I_B = 0.1A$			0.8	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 0.5A, I_B = 0.1A$			1	V
Transition Frequency	f_T	$V_{CE} = 10V, I_C = 100mA, f = 1MHz$	4			MHz
Fall time	t_f	$I_C = 1A$			0.7	μs
Storage time	t_s	$I_{B1} = -I_{B2} = 0.2A$			4	μs

CLASSIFICATION OF h_{FE}

Rank		
Range	20-30	30-40

Static Characteristic
