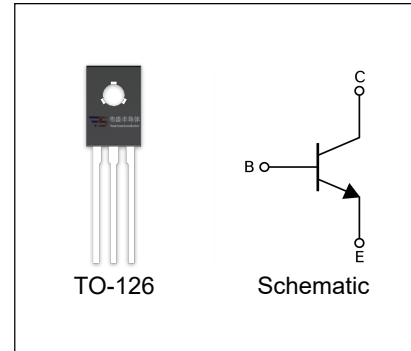


13003 TRANSISTOR (NPN)

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	1.5	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	$V_{(BR)CBO}$	$I_C = 5mA, I_E = 0$	700			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 2mA, I_C = 0$	9			V
Collector cut-off current	I_{CBO}	$V_{CB} = 700V, I_E = 0$			1	mA
Collector cut-off current	I_{CEO}	$V_{CE} = 400V, I_B = 0$			0.5	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = 9V, I_C = 0$			1	mA
DC current gain	h_{FE1}	$V_{CE} = 5V, I_C = 0.5 A$	20		40	
	h_{FE2}	$V_{CE} = 5V, I_C = 1.5A$	5			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1A, I_B = 0.25A$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1A, I_B = 0.25A$			1.2	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	$I_C = 250mA$ (UI9600)	2		4	μs

CLASSIFICATION OF $h_{FE(1)}$

Range	20-30	30-40
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CLASSIFICATION OF t_s

Rank	A	B
Range	2.0-3.0 (μs)	3.0-4.0 (μs)

