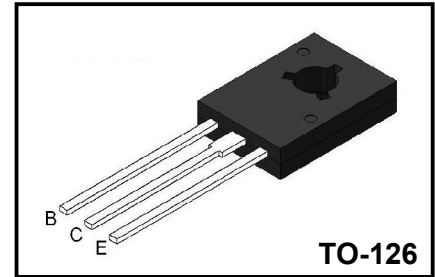


NPN Plastic-Encapsulate Transistors

High Voltage Mode Application

High speed Switching



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	700	V
Collector-Emitter Voltage	BV_{CEO}	480	V
Emitter-Base Voltage	BV_{EBO}	9	V
Collector Current	I_C	1.5	A
Collector Power Dissipation	P_C	1.25	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~150	°C

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	$I_C = 100\mu A, I_E = 0$	700			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 1mA, I_B = 0$	480			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 100\mu A, I_C = 0$	9			V
Collector cut-off current	I_{CBO}	$V_{CB} = 700V, I_E = 0$			1	mA
Collector cut-off current	I_{CEO}	$V_{CE} = 400V, I_B = 0$			10	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = 9V, I_C = 0$			1	mA
DC current gain	h_{FE}	$V_{CE} = 2V, I_C = 0.5A$	8		40	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 0.5A, I_B = 0.1A$ $I_C = 1A, I_B = 0.25A$			0.5 1.0	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 0.5A, I_B = 0.1A$ $I_C = 1A, I_B = 0.25A$			1.0 1.2	V
Transition frequency	f_T	$V_{CE} = 10V, I_B = 0.1A$	8			MHz

Typical Characteristics

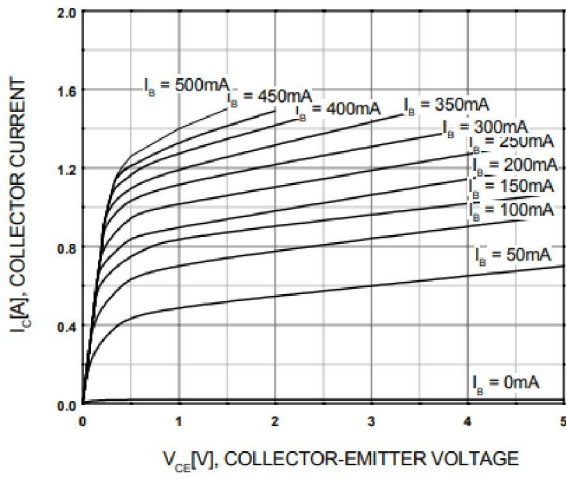


Figure 1. Static Characteristic

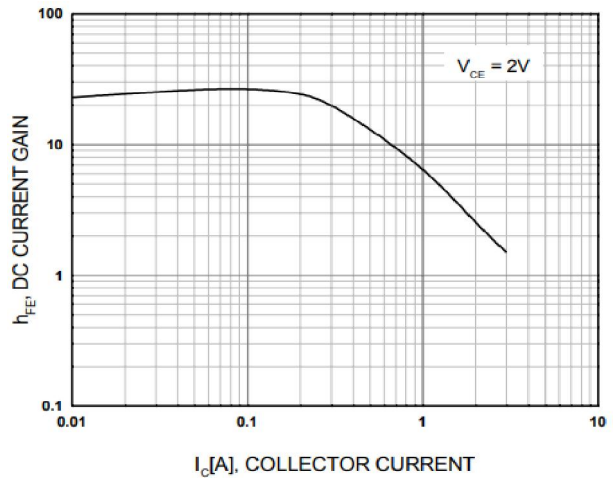


Figure 2. DC current Gain

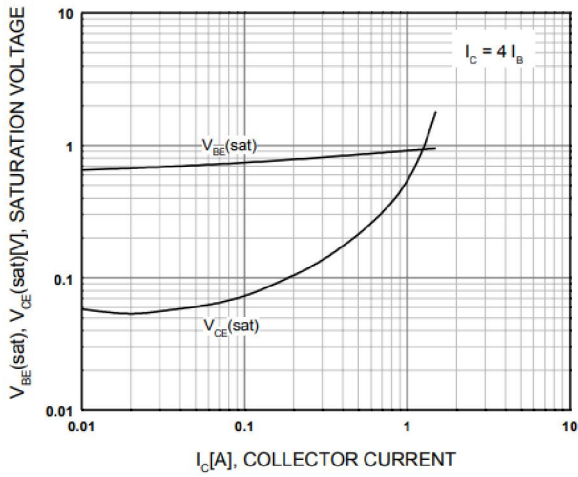


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

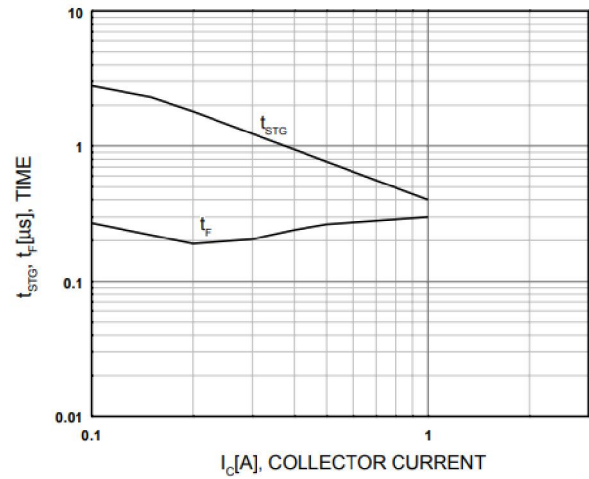


Figure 4. Switching Time

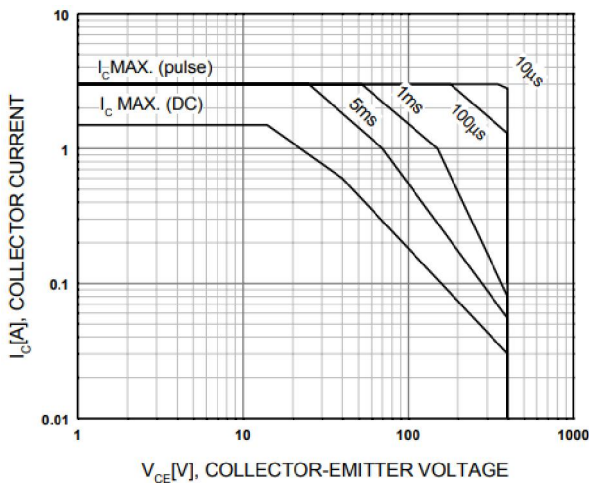


Figure 5. Safe Operating Area

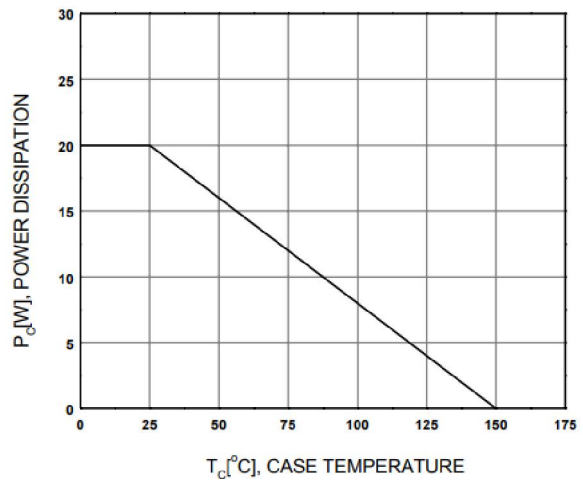


Figure 6. Power Derating

Package Dimensions

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.40	2.80	0.094	0.110
A1	1.00	1.40	0.039	0.055
b	0.66	0.86	0.026	0.034
b1	1.17	1.37	0.046	0.054
c	0.40	0.60	0.016	0.024
D	7.30	7.70	0.287	0.303
E	10.60	11.00	0.417	0.433
e	2.25	2.33	0.089	0.092
e1	4.50	4.66	0.177	0.183
L	14.00	15.00	0.551	0.591
L1	1.90	2.50	0.075	0.098
Φ	3.10	3.30	0.122	0.130

Product Specification Classification

Part Number	Package	Marking	Pack
YFW13003	TO-126	YFW 13003	500PCS/bag

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