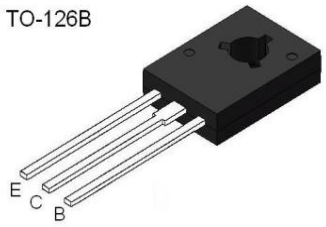
Applications

- Power amplifier
- Power switching



Features

- Low saturation voltage:$V_{CE(sat)}$=0.5V (Max.) (I_C=1A)
- High current output up to 2A

Absolute Maximum Ratings (Ta=25℃)

Parameter		Symbol	Value	Unit
Collector-base voltage		BV_{CBO}	50	V
Collector-emitter voltage		BV_{CEO}	50	V
Emitter-base voltage		BV_{EBO}	5	V
Collector current		I_C	2	A
Collector power dissipation	Ta=25℃	P_C	1.5	W
	Tc=25℃		10	
Junction temperature		T_j	150	℃
Storage temperature		T_{stg}	-55～150	℃

Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	I_C = 100μA，I_E = 0	50			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = 1mA，I_B = 0	50			V
Emitter-base breakdown voltage	BV_{EBO}	I_E = 100μA，I_C = 0	5			V
Collector cut-off current	I_{CBO}	V_{CB} = 50V，I_E = 0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB} = 5V，I_C = 0			0.1	μA
DC current gain*	h_{FE}(1)	V_{CE} = 2V，I_C= 0.5A	70		400	
	h_{FE}(2)	V_{CE} = 2V，I_C= 1.5A	40			
Collector-emitter saturation voltage*	$V_{CE(sat)}$	I_C = 1A，I_B = 0.05A			0.5	V
Base -emitter saturation voltage*	$V_{BE(sat)}$	I_C = 1A，I_B = 0.05A			1.2	V
Transition frequency	f_T	V_{CE} = 2V，I_B = 0.5A		100		MHz
Output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		30		pF

* Pulse Test: PW=300μs, duty Cycle=1.5% Pulsed

h_{FE}(1) Classification

Classification	O	Y	G
Range	70~140	120~240	200~400

Typical Characteristics

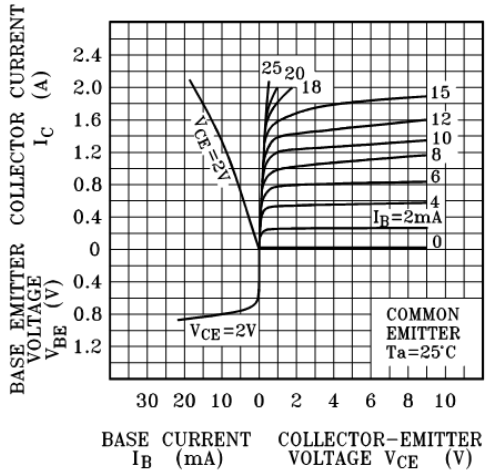


Figure 1. Static Characteristic

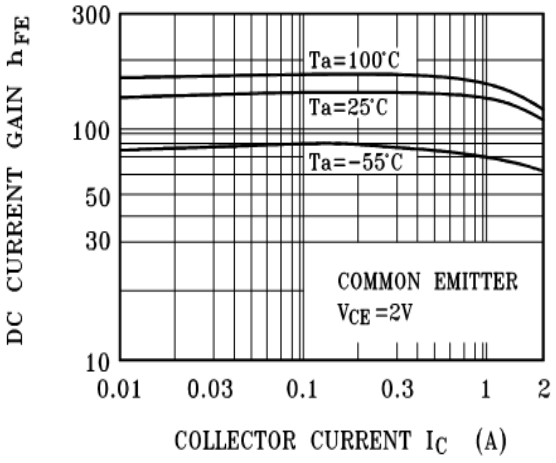


Figure 2. DC current Gain

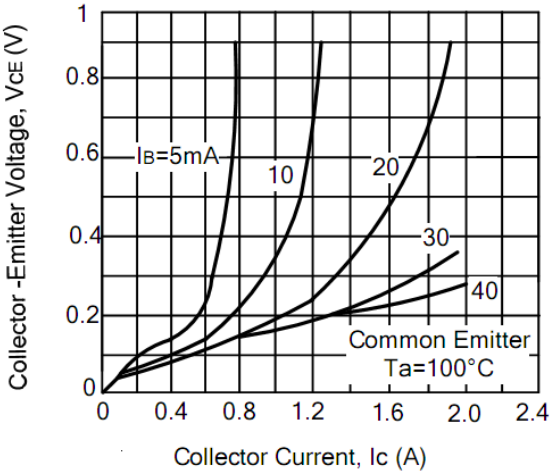


Figure 3. Collector-Emitter Saturation Voltage

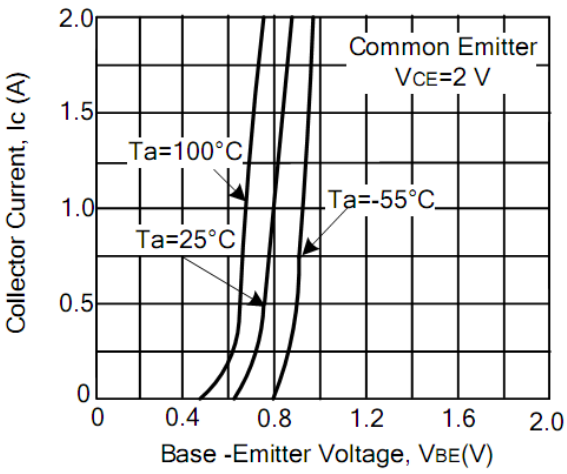


Figure 4. Base-Emitter Saturation Voltage

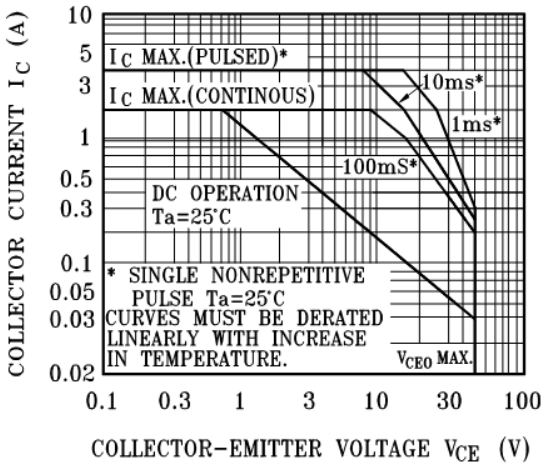


Figure 5. Safe Operating Area

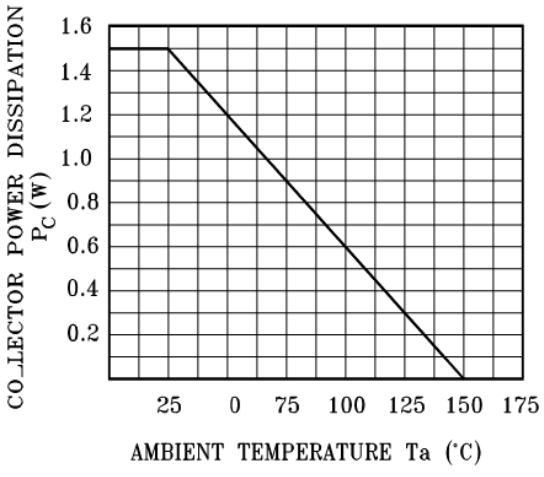
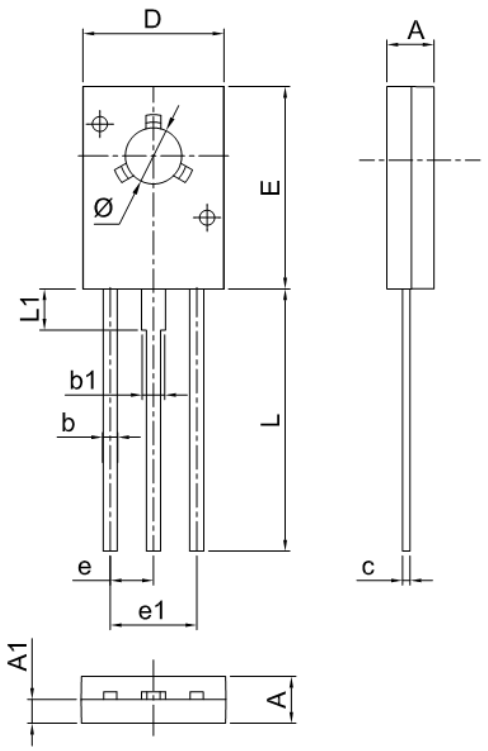


Figure 6. Power Derating

Package Dimensions



Dim	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

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