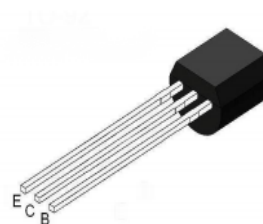




1.Features

- High Speed Switching
- Suitable for Switching Regulator and Motor Control

Case:TO-92



2.Mechanical Data

- Case:Molded Plastic,TO-92
- Epoxy:UL 94V-0 rate flame retardant
- Terminals:Plated Leads Solderable per MIL-STD-750,Method-2026.
- Marking: marked on body.
- Mounting Position : Any.

3.Maximum Ratings and Electrical Characteristics

Rating at 25°C Ambient temperature unless otherwise specified

Parameters	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	700	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	9	V
Collector Current -Continuous	I_C	1.8	A
Power Dissipation $T_A=25^{\circ}\text{C}$	P_C	0.9	W
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Operating and Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

4.Electrical Characteristics (TA=25°C unless otherwise noted)

Parameters	Symbol	Cindition	Min	TYP	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	700	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	400	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	9	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=700\text{V}, I_E=0$			10	μA
Collector cut-off current	I_{CEO}	$V_{CE}=400\text{V}, I_B=0$	-	-	1	mA
Emitter cut-off current	I_{EBO}	$V_{EB}=9\text{V}, I_C=0$	-	-	10	μA
DC current gain	h_{FE}	$V_{CE}=2\text{V}, I_C=0.5\text{A}$	8	-	40	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=0.5\text{A}, I_B=0.1\text{A}$	-	-	0.5	V
		$I_C=1\text{A}, I_B=0.25\text{A}$	-	-	1	
		$I_C=1.5\text{A}, I_B=0.5\text{A}$	-	-	1.5	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=0.5\text{A}, I_B=0.1\text{A}$	-	-	1	V
		$I_C=1\text{A}, I_B=0.25\text{A}$	-	-	1.2	
Transition frequency	f_T	$V_{CE}=10\text{V}, I_B=0.1\text{A}$	5	-	-	MHz



5. Rating And Characteristic Curves

Fig.1 Static Characteristic

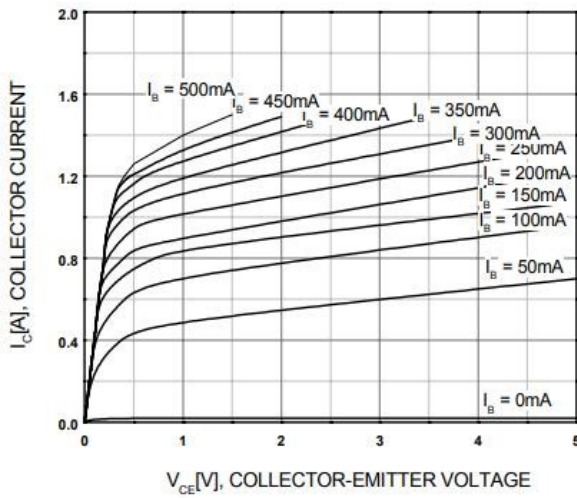


Fig.2 DC current Gain

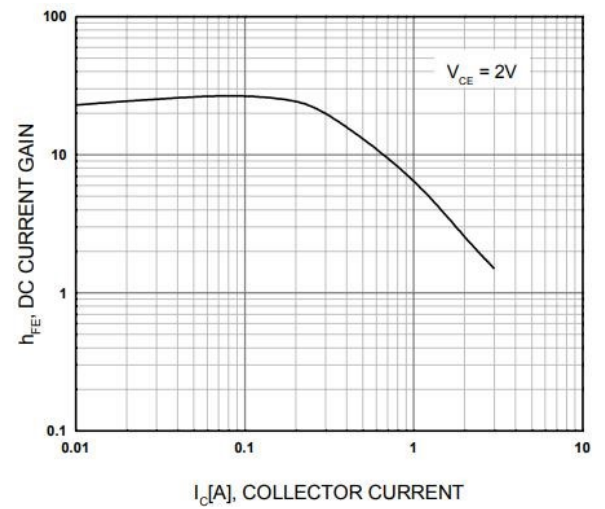


Fig.3 Base-Emitter/Collector-Emitter Saturation Voltage

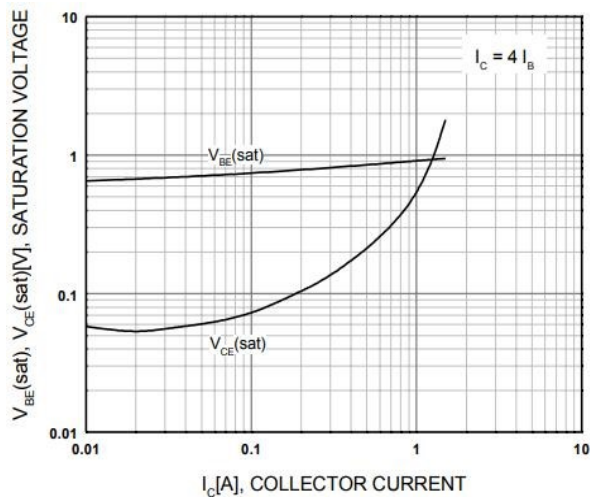


Fig.4 Switching Time

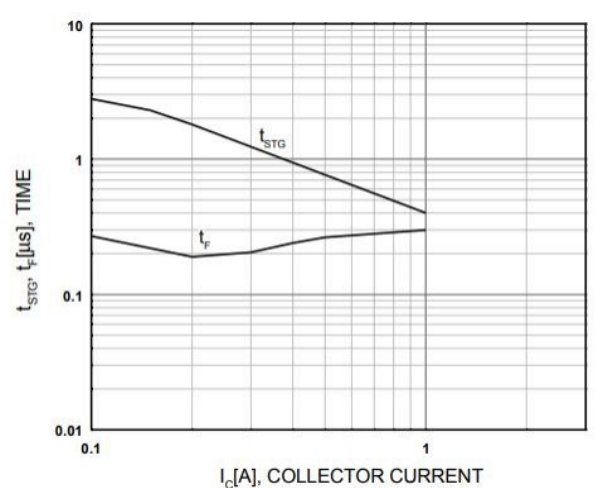


Fig.5 Safe Operating Area

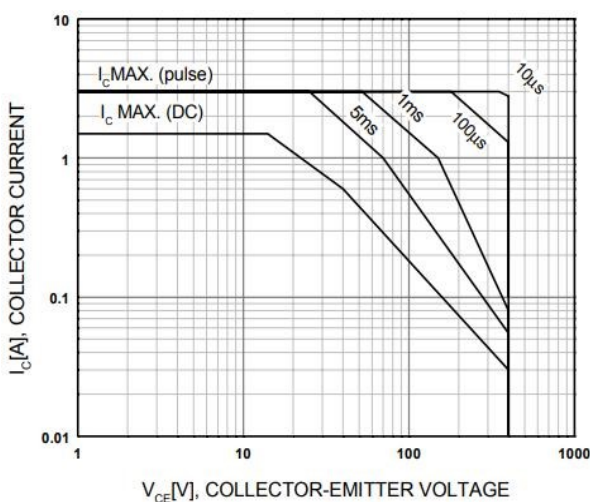
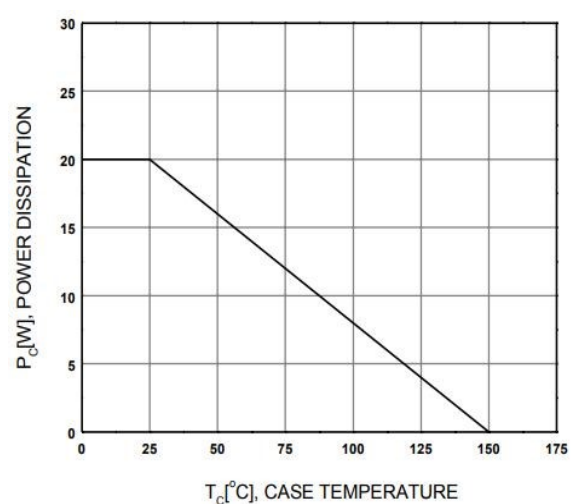
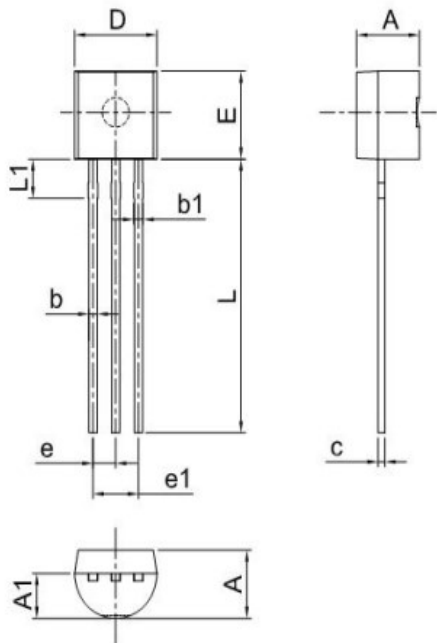


Fig.6 Power Derating



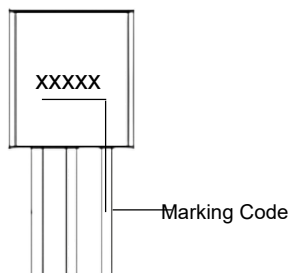


6.Dimensions



Dimensions	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	0.130	0.146	3.30	3.70
A1	0.083	0.098	2.10	2.50
b	0.016	0.020	0.40	0.50
b1	0.020	0.028	0.50	0.70
c	0.014	0.018	0.35	0.45
D	0.175	0.185	4.45	4.70
E	0.175	0.183	4.45	4.65
e	0.046	0.054	1.17	1.37
e1	0.092	0.104	2.34	2.64
L	0.531	0.571	13.50	14.50
L1	0.071	0.087	1.80	2.20

7. Part Marking System



8. Package Information

Package	Box	Carton
TO92	2000pcs	20,000pcs



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