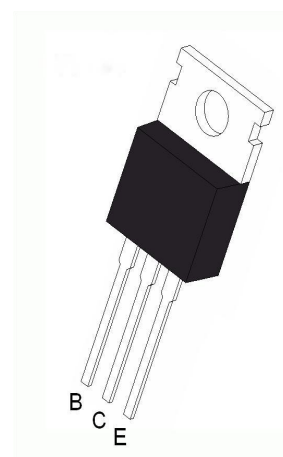




1.Features

- High speed Switching
- Suitable for Switching Regulator or Electronic Transformer For Halogen Lamps

Case:TO-220



2.Mechanical Data

- Case:Molded Plastic,TO-220
- 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	4	A
Power Dissipation $T_A=25^\circ\text{C}$	P_C	80	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-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}	$V_{CB} = 700\text{V}, I_E = 0$	-	-	100	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = 450\text{V}, I_B = 0$	-	-	250	mA
*DC current gain	h_{FE}	$V_{CE} = 5\text{V}, I_C = 10\text{mA}$	8	-	40	-
		$V_{CE} = 5\text{V}, I_C = 0.5\text{A}$	10			
		$V_{CE} = 5\text{V}, I_C = 0.5\text{A}$	8			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1\text{A}, I_B = 0.2\text{A}$	-	-	0.5	V
		$I_C = 2\text{A}, I_B = 0.5\text{A}$			0.7	
		$I_C = 4\text{A}, I_B = 1\text{A}$			1.1	
*Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1\text{A}, I_B = 0.25\text{A}$	-	-	1.1	V
		$I_C = 2\text{A}, I_B = 0.4\text{A}$			1.2	
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_B = 0.1\text{A}$	4	-	-	MHz
Turn On Time	t_{ON}	$V_{CC} = 150\text{V}, I_C = 2.5\text{A}$ $I_{B1} = 0.5\text{A}, I_{B2} = -0.5\text{A},$ $t_p = 30\text{ms}$	-	-	0.8	μs
Storage Time	t_{STG}				4	μs
Fall Time	t_f				0.9	μs

• Pulsed: Pulse duration = 300 μs , duty cycle 1.5 %



5. Rating And Characteristic Curves

Fig.1 DC current Gain

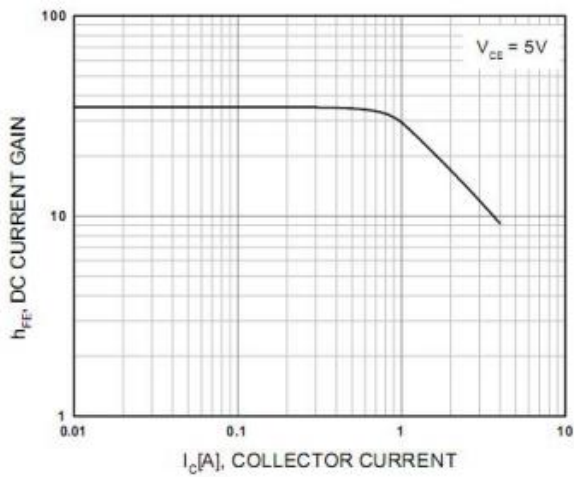


Fig.2 Base-Emitter/Collector-Emitter Saturation Voltage

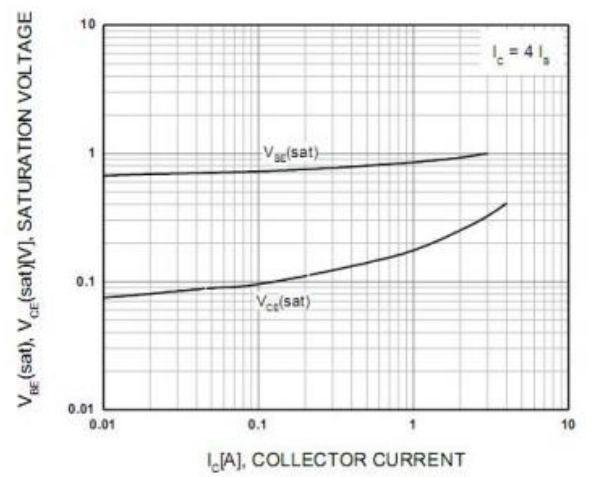


Fig.3 Collector Output Capacitance

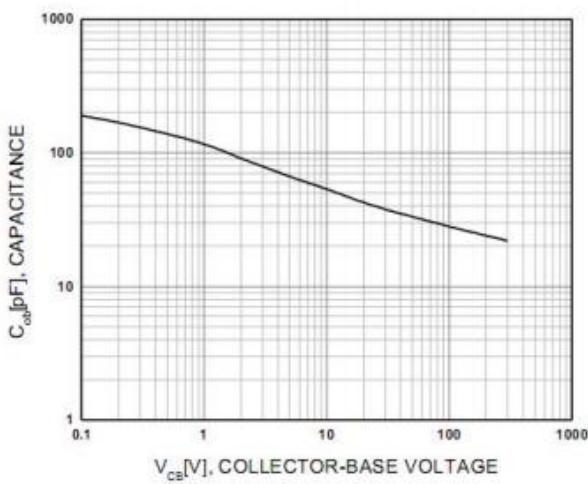


Fig.4 Turn On Time

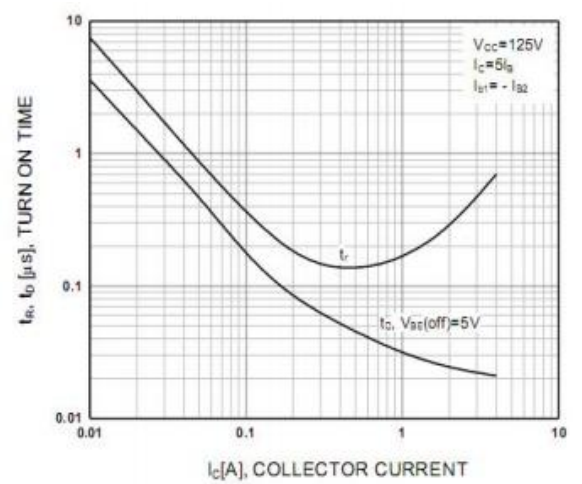


Fig.5 Turn Off Time

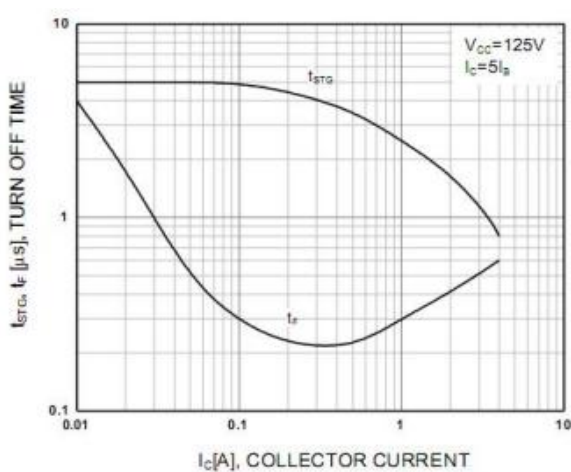
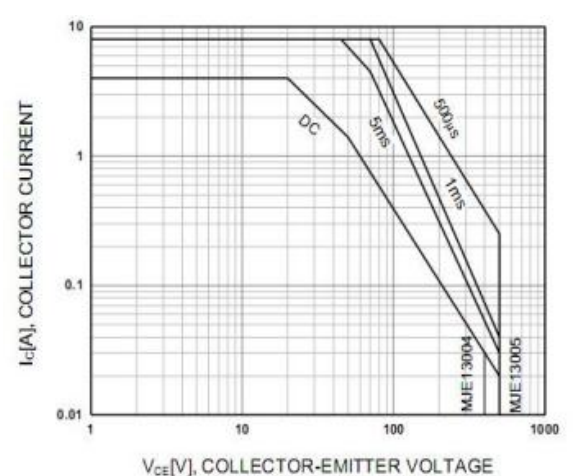
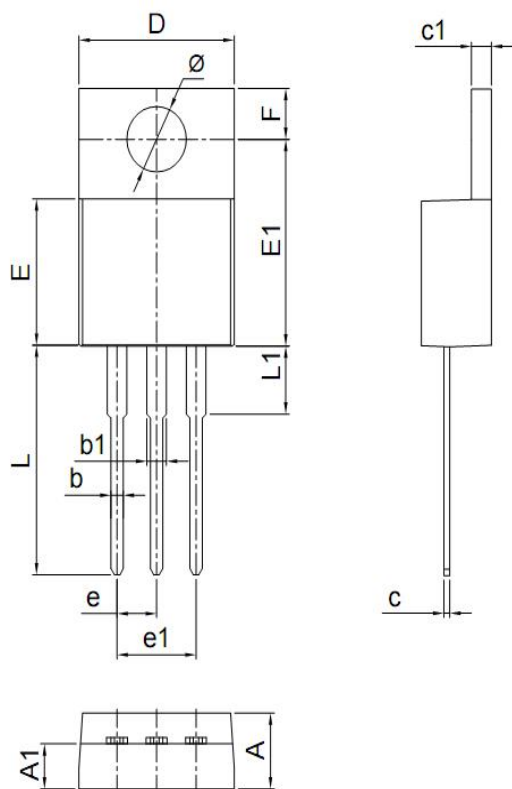


Fig.6 Safe Operating Area



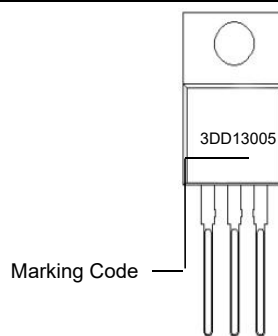
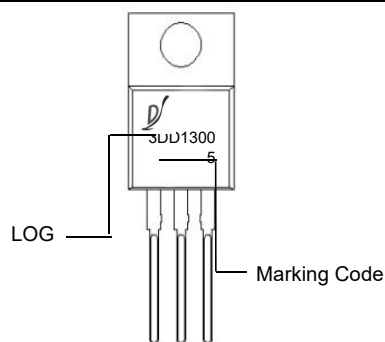


6. Dimensions



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.169	0.184	4.30	4.67
A1	0.098	0.111	2.50	2.82
b	0.028	0.036	0.70	0.91
b1	0.046	0.055	1.17	1.40
c	0.012	0.024	0.30	0.60
c1	0.045	0.055	1.15	1.40
D	0.390	0.402	9.90	10.20
E	0.335	0.354	8.50	9.00
E1	0.472	0.492	12.00	12.50
e	0.094	0.104	2.40	2.64
F	0.102	0.110	2.60	2.80
L	0.520	0.543	13.20	13.80
L1	0.150	0.165	3.80	4.20
Φ	0.139	0.163	3.54	4.14

7. Part Marking System



8. Package Information

Package	Packing Type	Quantity(pcs)
TO-220	Tube	50



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