

Silicon NPN Power Transistors

2SD1565

DESCRIPTION

- With TO-220 package
- High DC current gain
- DARLINGTON
- Complement type 2SB1087

APPLICATIONS

- For low frequency power amplifier and power switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

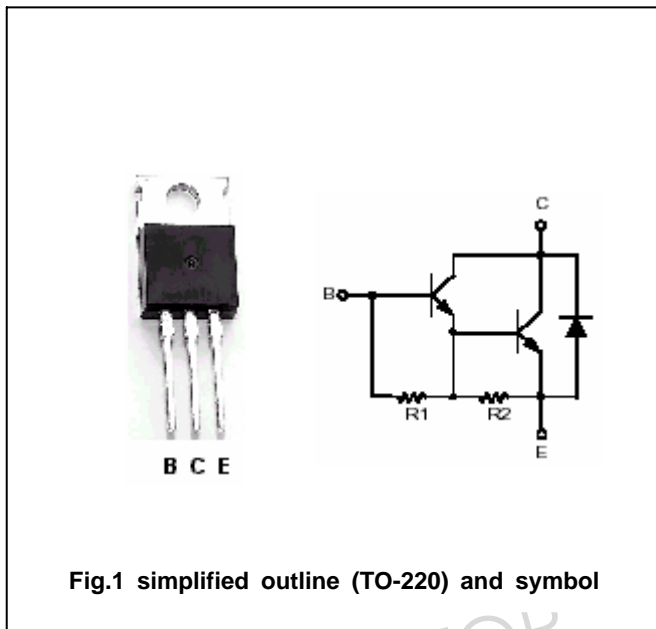


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		5	A
I_{CM}	Collector current-peak		10	A
I_B	Base current		0.5	A
P_T	Total power dissipation	$T_C=25$	30	W
		$T_a=25$	1.5	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A ; I _B =0	100			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =2A; I _B =2mA			1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2A; I _B =2mA			2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =100V ; I _E =0			1.0	μA
I _{EBO}	Emitter cut-off current	V _{EB} =7V; I _C =0			5.0	mA
h _{FE-1}	DC current gain	I _C =2A ; V _{CE} =2V	2000		20000	
h _{FE-2}	DC current gain	I _C =4A ; V _{CE} =2V	500			

Switching times

t _{on}	Turn-on time	I _C =2A; I _{B1} =-I _{B2} =2mA R _L =25Ω ; V _{CC} 50V	1.0		μs
t _s	Storage time		3.5		μs
t _f	Fall time		1.2		μs

◆ h_{FE-1} classifications

M	L	K
2000-5000	4000-10000	8000-20000

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PACKAGE OUTLINE

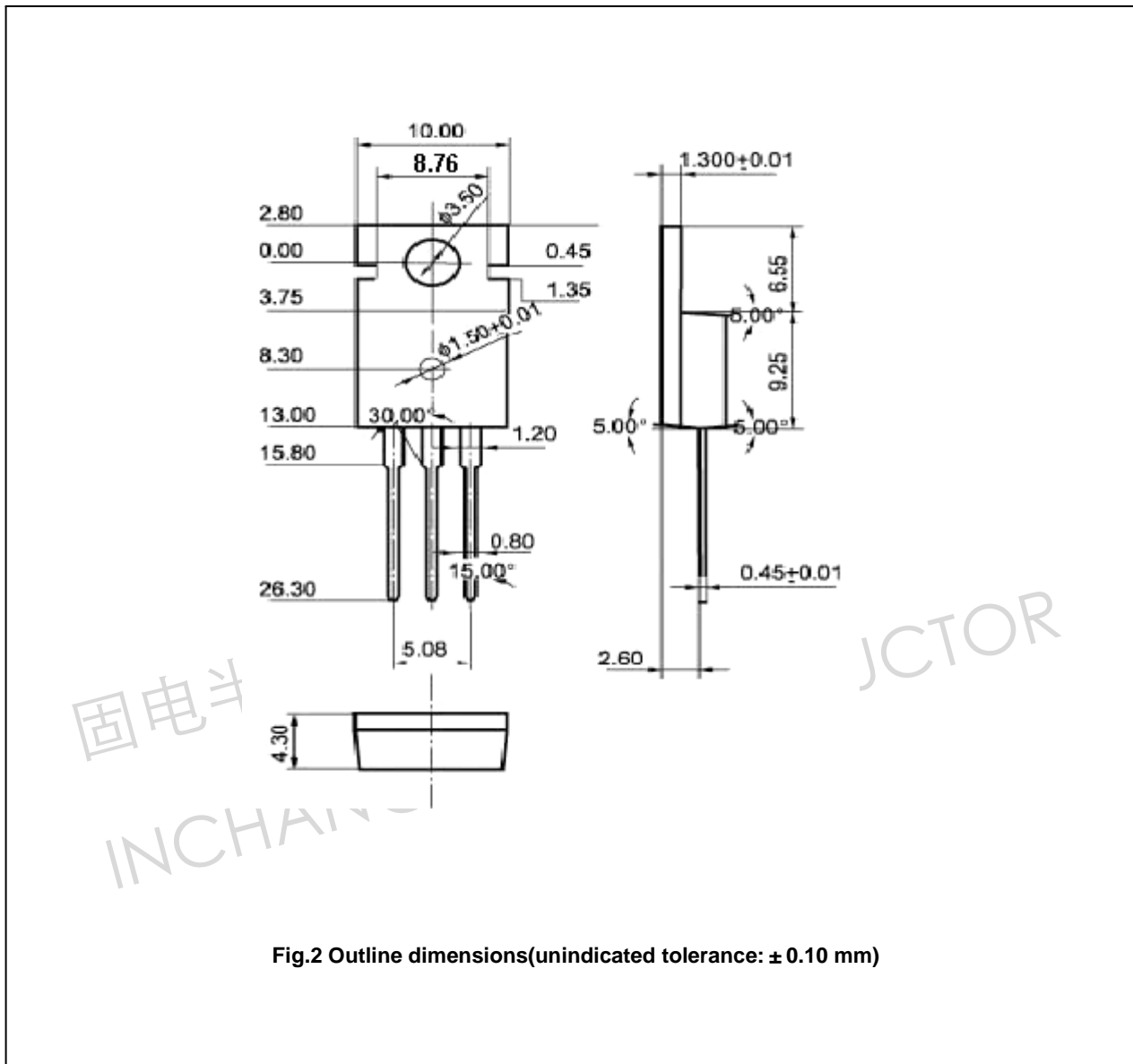


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)