

Inchange Semiconductor

Product Specification

Silicon NPN Power Transistors

2SD970

DESCRIPTION

- With TO-220 package
- High DC current gain
- DARLINGTON
- Complement to type 2SB791

APPLICATIONS

- For medium speed and power switching applications

PINNING

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

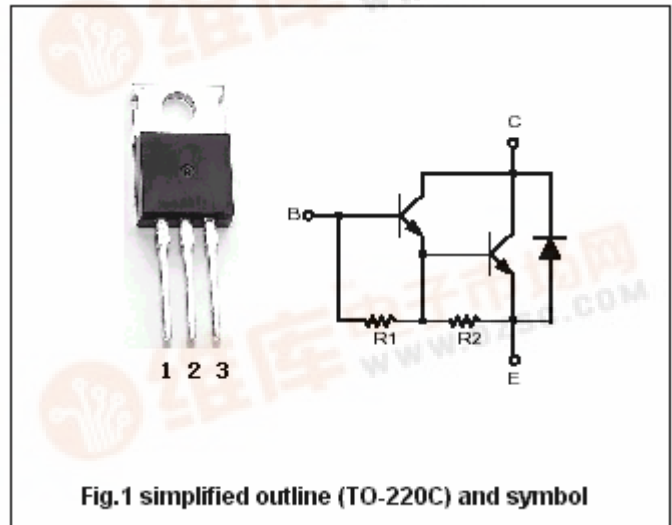


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	120	V
V _{CEO}	Collector-emitter voltage	Open base	120	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current		8	A
I _{CM}	Collector current-peak		12	A
P _C	Collector dissipation	T _C =25	40	W
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 _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =25mA ; R _{BE} =0	120			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =50mA ; I _C =0	7			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =4A ; I _B =8mA			1.5	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =8A ; I _B =80mA			3.0	V
V _{BEsat-1}	Base-emitter saturation voltage	I _C =4A ; I _B =8mA			2.0	V
V _{BEsat-2}	Base-emitter saturation voltage	I _C =8A ; I _B =80mA			3.5	V
I _{CBO}	Collector cut-off current	V _{CB} =120V ; I _E =0			100	μ A
I _{CEO}	Collector cut-off current	V _{CE} =100V ; R _{BE} =			10	μ A
h _{FE}	DC current gain	I _C =4A ; V _{CE} =3V	1000		20000	

Switching times

t _{on}	Turn-on time	I _C =4A ; I _{B1} =-I _{B2} =8mA		0.4		μ s
t _s	Storage time			5.4		μ s
t _f	Fall time			1.1		μ s

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PACKAGE OUTLINE

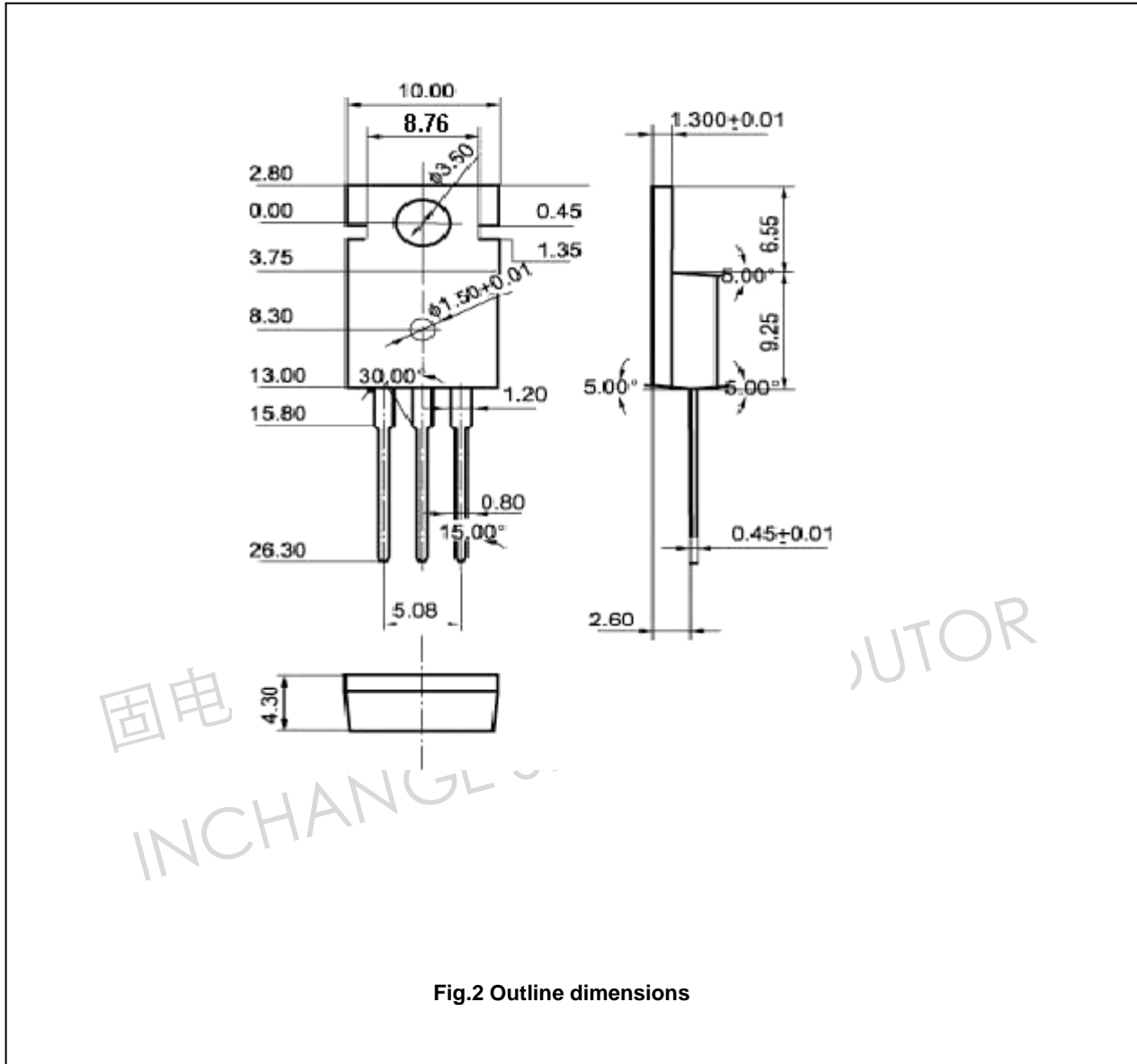


Fig.2 Outline dimensions