

Silicon NPN Power Transistors

2SD970

DESCRIPTION

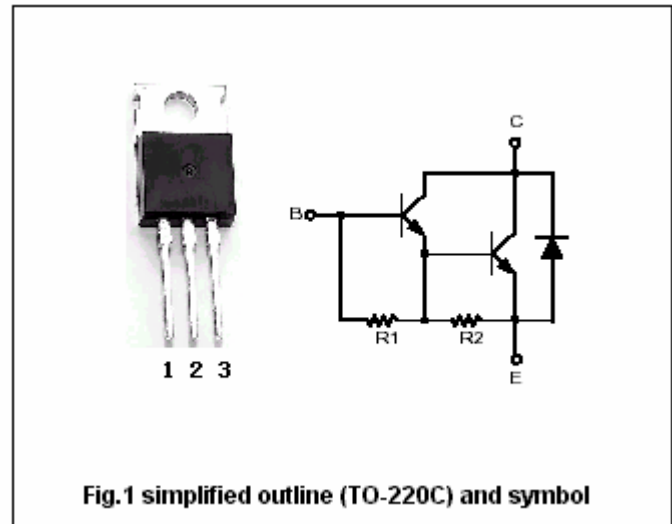
- With TO-220 package
- High DC current gain
- DARLINGTON
- Complement to type 2SB791

APPLICATIONS

- For medium speed and power switching applications

PINNING

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

Absolute maximum ratings($T_a=25^\circ$)

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	$T_C=25^\circ$	40	W
T_j	Junction temperature		150	$^\circ$
T_{stg}	Storage temperature		-55~150	$^\circ$

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CHARACTERISTICS

T_j=25 °C 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	μA
I _{CEO}	Collector cut-off current	V _{CE} =100V ; R _{BE} =∞			10	μA
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		μs
t _s	Storage time			5.4		μs
t _f	Fall time			1.1		μs

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PACKAGE OUTLINE

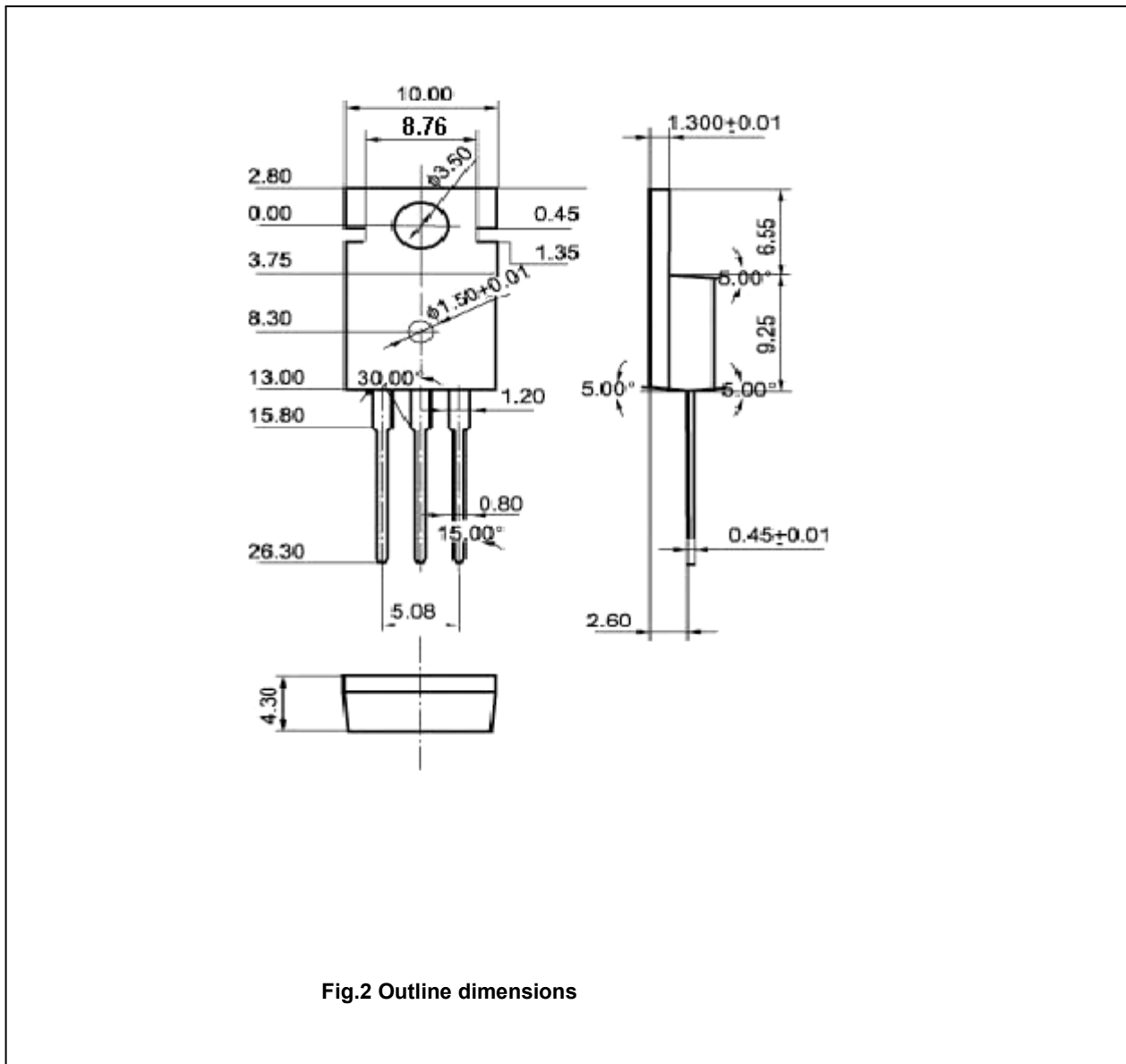


Fig.2 Outline dimensions