Silicon NPN Power Transistors 2SD1196

DESCRIPTION

- With TO-220 package
- High DC current gain.
- High current capacity and wide ASO.
- Low saturation voltage.

APPLICATIONS

- Motor drivers, printer hammer drivers, relay drivers,voltage regulator control.

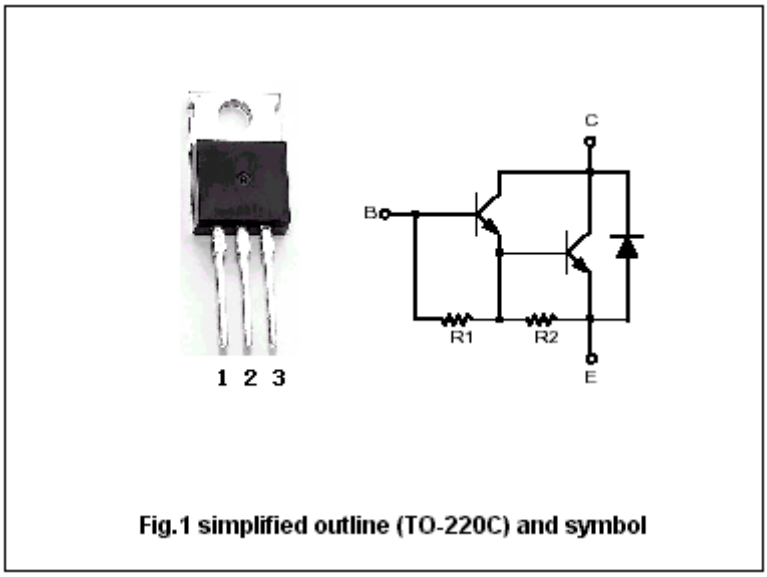

Fig.1 simplified outline (TO-220C) and symbol

PINNING

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

Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	110	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		8	A
I_{CM}	Collector current-peak		12	A
P_C	Collector power dissipation		1.75	W
		T_C=25℃	40	
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-55~150	℃

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CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V_{CBO}	Collector-base breakdown voltage	I_C=5mA ; I_E=0	110			V
V_{CEO}	Collector-emitter breakdown voltage	I_C=50mA ;R_{BE}=∞	100			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=4A, I_B=8mA		0.9	1.5	V
V_{BEsat}	Base-emitter saturation voltage	I_C=4A, I_B=8mA			2.0	V
I_{CBO}	Collector cut-offcurrent	V_{CB}=80V;I_E=0			0.1	mA
I_{EBO}	Emitter cut-offcurrent	V_{EB}=5V;I_C=0			3.0	mA
h_{FE}	DC current gain	I_C=4A ; V_{CE}=3V	1500	4000		
f_T	Transition frequency	I_C=4A ; V_{CE}=5V		20		MHz

Switching times

t_{on}	Turn-on time	I_C=500I_{B1}=-500I_{B2}=4A V_{CC}=50V;R_L=12.5Ω;		0.6		μs
t_{stg}	Storage time			4.8		μs
t_f	Fall time			1.6		μs

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PACKAGE OUTLINE

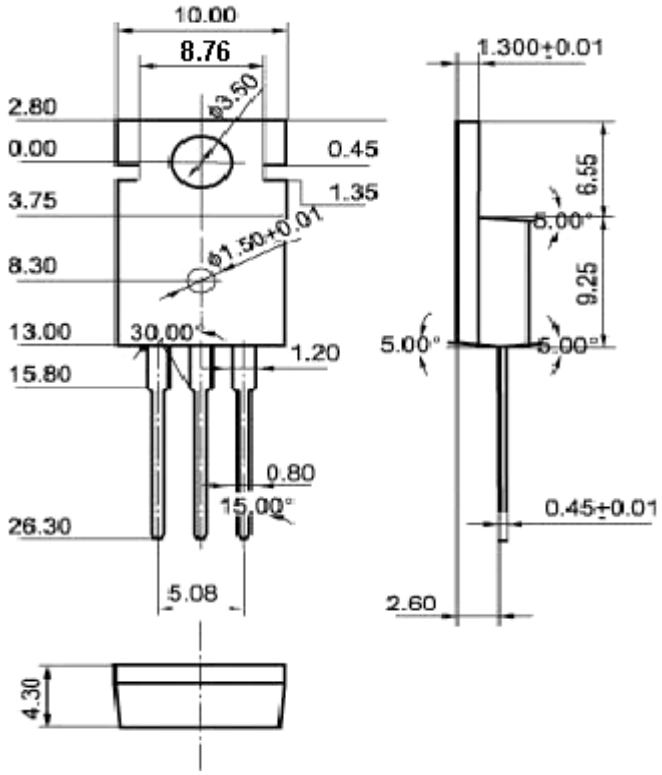

Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)