

Silicon NPN Power Transistors

2SD313

DESCRIPTION

- With TO-220C package
- Complement to type 2SB507
- Low collector saturation voltage

APPLICATIONS

- Designed for the output stage of 15W to 25W AF power amplifier

PINNING

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

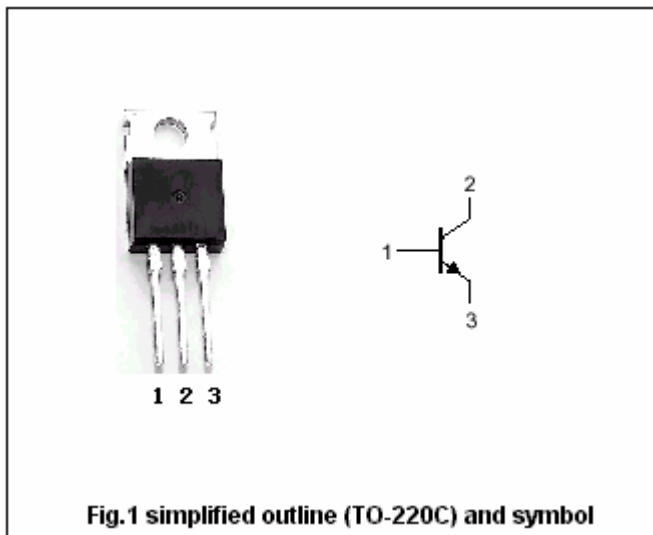


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	60	V
V _{CEO}	Collector-emitter voltage	Open base	60	V
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current (DC)		3	A
I _{CM}	Collector current-Peak		8	A
I _B	Base current		1	A
P _C	Collector dissipation	T _C =25°C	30	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-50~150	°C

THERMAL CHARACTERISTICS

SYMBOL	CHARACTERISTICS	MAX	UNIT
Rθ _{jc}	Thermal resistance junction to case	4.16	°C/W

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO}	Collector-emitter voltage	I _C =10mA; I _B =0	60			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =2A; I _B =0.2A			1.0	V
V _{BE}	Base-emitter on voltage	I _C =1A; V _{CE} =2V			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =60V; I _E =0			0.1	mA
I _{CEO}	Collector cut-off current	V _{CE} =60V; I _B =0			5	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1	mA
h _{FE-1}	DC current gain	I _C =1A; V _{CE} =2V	40		320	
h _{FE-2}	DC current gain	I _C =0.1A; V _{CE} =2V	40			
f _T	Transition frequency	I _C =0.5A; V _{CE} =5V	5			MHz

◆ h_{FE-1} Classifications

C	D	E	F
40-80	60-120	100-200	160-320

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PACKAGE OUTLINE



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