

Silicon NPN Power Transistors

2N6294 2N6295

DESCRIPTION

- With TO-66 package
- DARLINGTON
- Complement to type 2N6296/6297

APPLICATIONS

- For high gain amplifier and medium speed switching applications

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

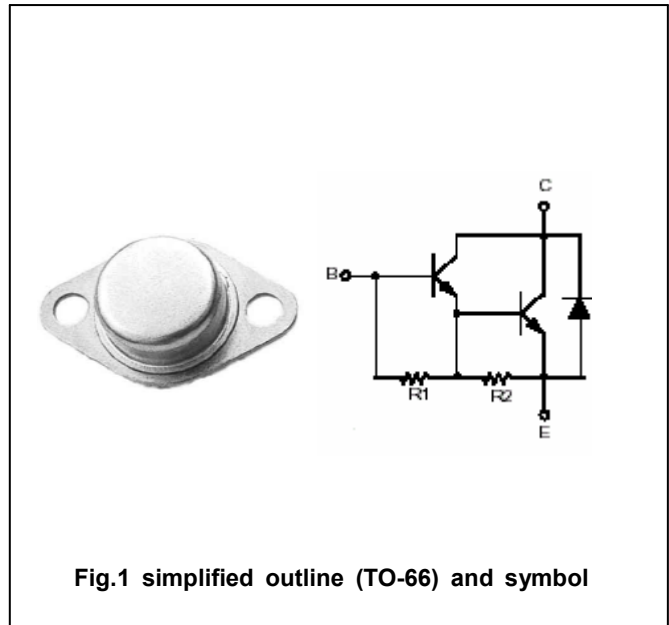


Fig.1 simplified outline (TO-66) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	2N6294	60	V
		2N6295	80	
V _{CEO}	Collector-emitter voltage	2N6294	60	V
		2N6295	80	
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		4	A
I _{CM}	Collector current-Peak		8	A
I _B	Base current		80	mA
P _T	Total power dissipation	T _C =25□	50	W
T _j	Junction temperature		150	□
T _{stg}	Storage temperature		-65~200	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{thj-c}	Thermal resistance from junction to case	3.5	□/W

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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	2N6294	I _C =50mA ; I _B =0	60			V
		2N6295		80			
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =2A ; I _B =8mA			2.0	V	
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =4A ; I _B =40mA			3.0	V	
V _{BEsat}	Base-emitter saturation voltage	I _C =4A ; I _B =40mA			4.0	V	
V _{BE}	Base -emitter on voltage	I _C =2A ; V _{CE} =3V			2.8	V	
I _{CEX}	Collector cut-off current	V _{CE} =Rated V _{CE} ; V _{BE(off)} =1.5V T _C =150 °C			0.5 5.0	mA	
I _{CEO}	Collector cut-off current	V _{CE} =1/2Rated V _{CEO} ; I _B =0			0.5	mA	
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			2.0	mA	
h _{FE-1}	DC current gain	I _C =2A ; V _{CE} =3V	750		18000		
h _{FE-2}	DC current gain	I _C =4A ; V _{CE} =3V	100				
f _T	Transition frequency	I _C =1.5A ; V _{CE} =3V; f=1.0MHz	4.0			MHz	
C _{OB}	Output capacitance	I _E =0 ; V _{CB} =10V; f=0.1MHz			120	pF	

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PACKAGE OUTLINE



Fig.2 Outline dimensions

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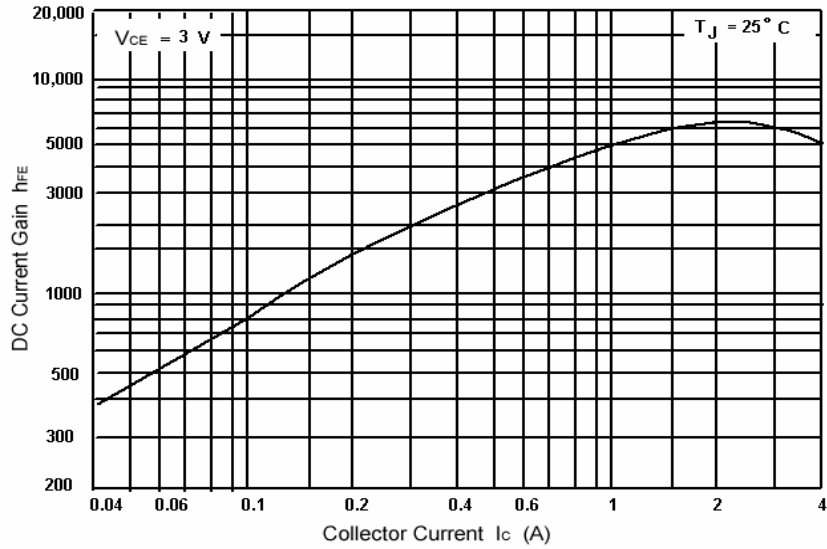


Fig.3 DC current Gain

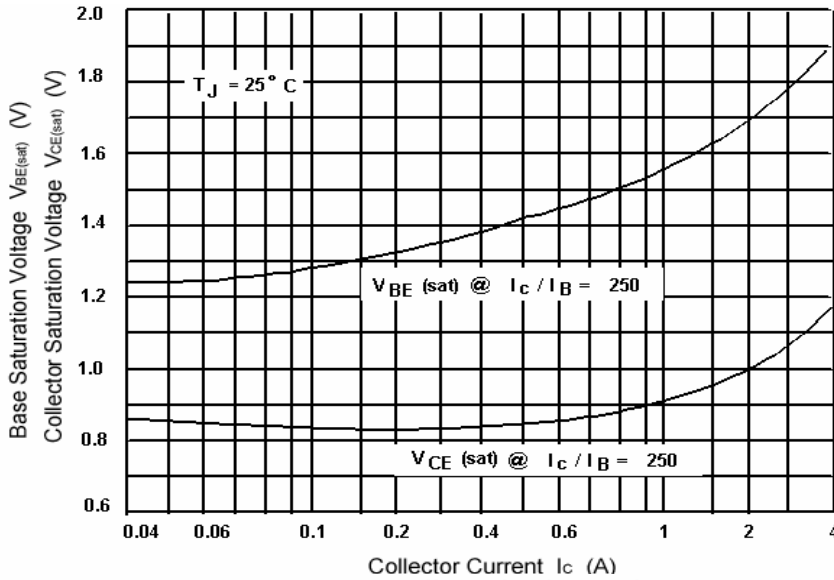


Fig.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

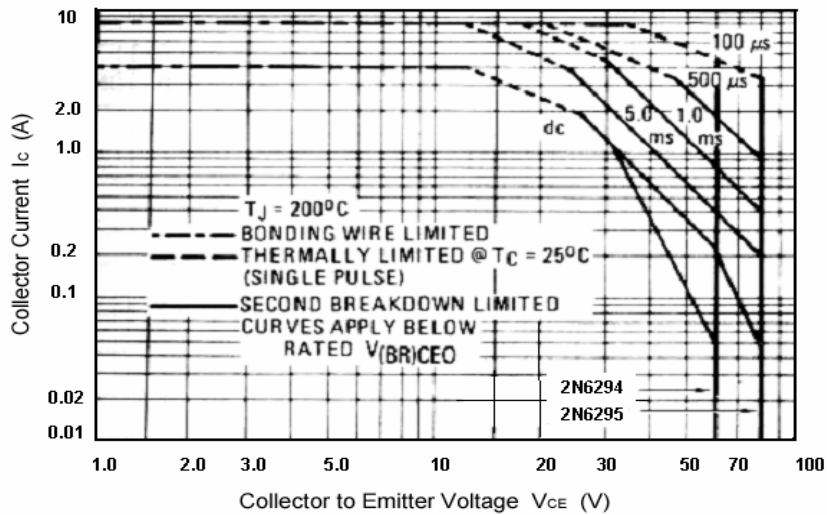


Fig.5 Safe Operating Area