

Silicon NPN Power Transistors

2SD1297

DESCRIPTION

- With TO-3PN package
- High DC current gain
- Low saturation voltage

APPLICATIONS

- For audio frequency power amplifier and low speed high current switching industrial use

PINNING

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

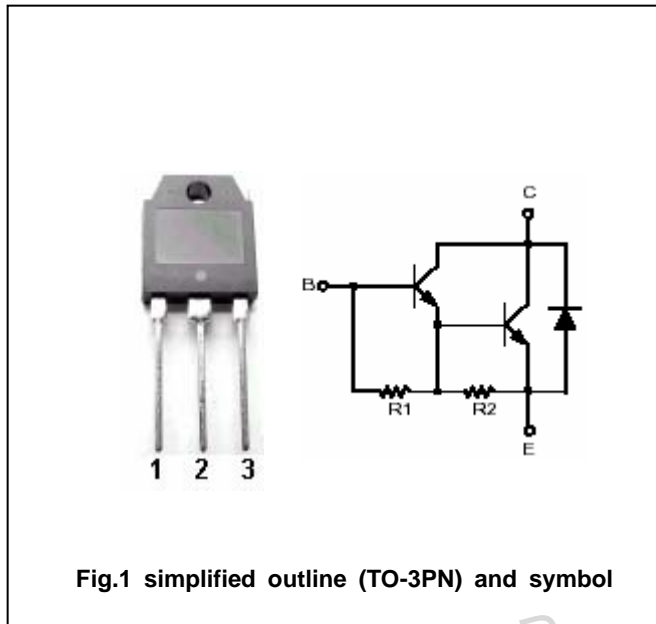


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{CBO}	Collector-base voltage	Open emitter	150	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	8	V
I_C	Collector current		25	A
I_{CM}	Collector current-peak		50	A
I_B	Base current		1.5	A
P_T	Total power dissipation	$T_C=25$	100	W
		$T_a=25$	3.0	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

Silicon NPN Power Transistors

2SD1297

CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =30mA ; I _B =0	100			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =15A ; I _B =30mA			1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =15A ; I _B =30mA			2.2	V
I _{CBO}	Collector cut-off current	V _{CB} =100V; I _E =0			10	μA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			5	mA
h _{FE-1}	DC current gain	I _C =15A ; V _{CE} =2V	1000		30000	
h _{FE-2}	DC current gain	I _C =25A ; V _{CE} =2V	250			

Switching times

t _{on}	Turn-on time	I _C =15A; I _{B1} =-I _{B2} =30mA V _{CC} 60V; R _L =4Ω	1.0		μs
t _{stg}	Storage time		5.0		μs
t _f	Fall time		2.0		μs

◆ h_{FE-1} Classifications

M	L	K	J
1000-3000	2000-5000	4000-10000	8000-30000

