

Silicon NPN Power Transistors

2SC4419

DESCRIPTION

- With TO-3PN package
- High reliability
- High voltage ,high speed switching

APPLICATIONS

- Switching regulators
- Ultrasonic generators
- High frequency inverters
- General purpose power amplifiers

PINNING

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

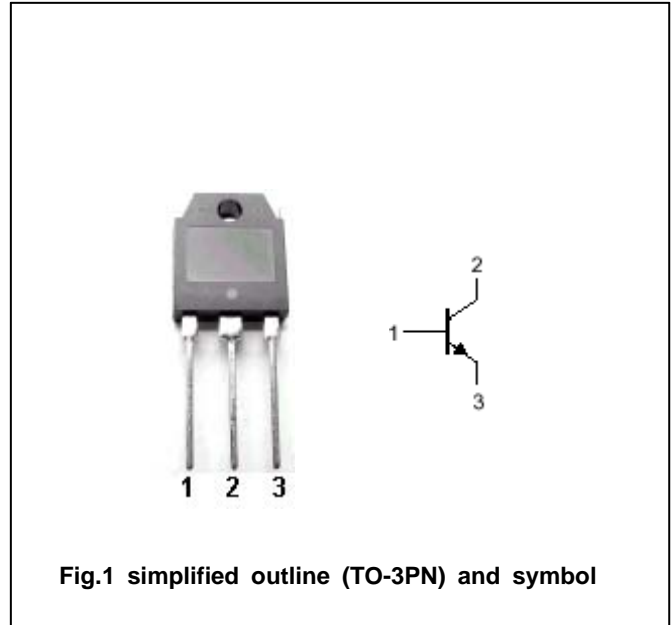


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	900	V
V _{CEO}	Collector-emitter voltage	Open base	800	V
V _{EBO}	Emitter-base voltage	Open collector	10	V
I _C	Collector current		6	A
I _B	Base current		3	A
P _C	Collector power dissipation	T _C =25°C	100	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction case	1.25	°C/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	I _C =10mA ; I _B =0	800			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =1mA ; I _E =0	900			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =1mA ; I _B =0	10			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =2A; I _B =0.4A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2A; I _B =0.4A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =900V ; I _E =0			1.0	mA
I _{EBO}	Emitter cut-off current	V _{EB} =10V; I _C =0			1.0	mA
h _{FE}	DC current gain	I _C =2A ; V _{CE} =5V	10			

Switching times

t _{on}	Turn-on time	I _C =3A; I _{B1} =0.6A; I _{B2} =-1.2A; R _L =100 Ω P _W =20 μ s, Duty ≤ 2%			1.0	μ s
t _{stg}	Storage time				4.0	μ s
t _f	Fall time				0.8	μ s

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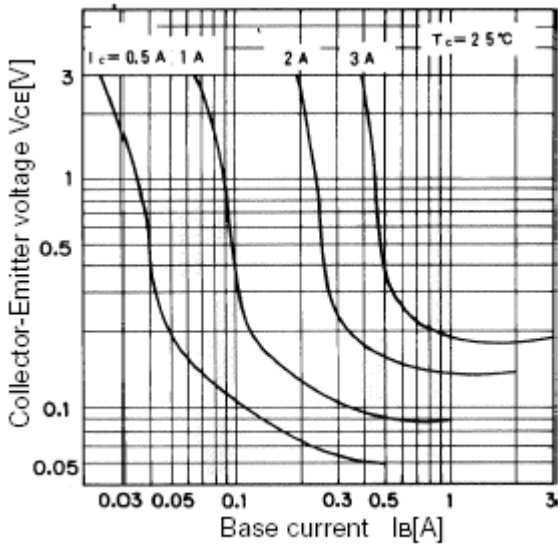


Fig.3 Static Characteristic

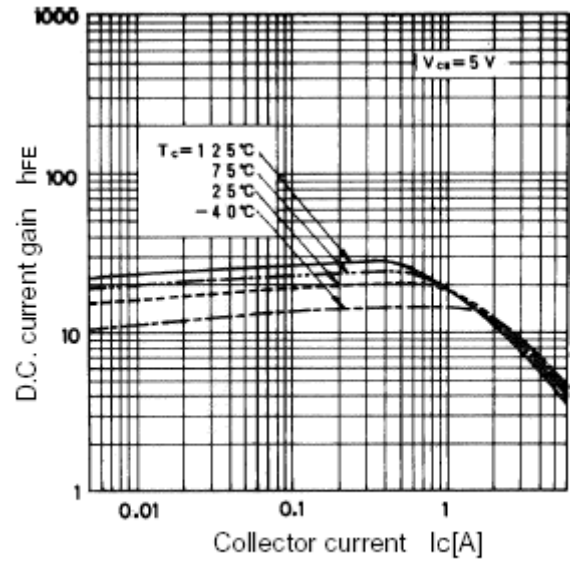


Fig.4 DC current Gain

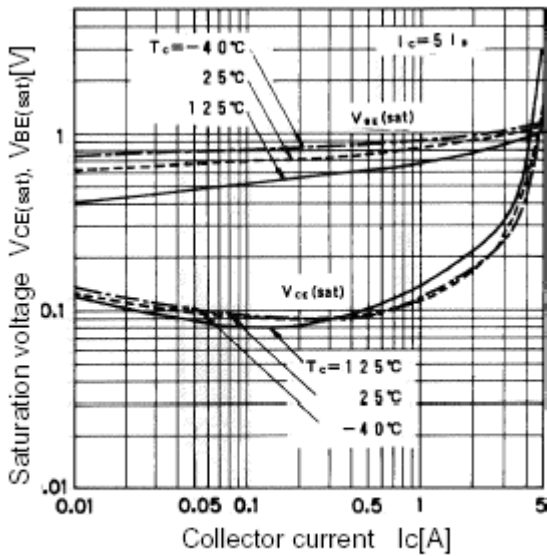


Fig.5 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

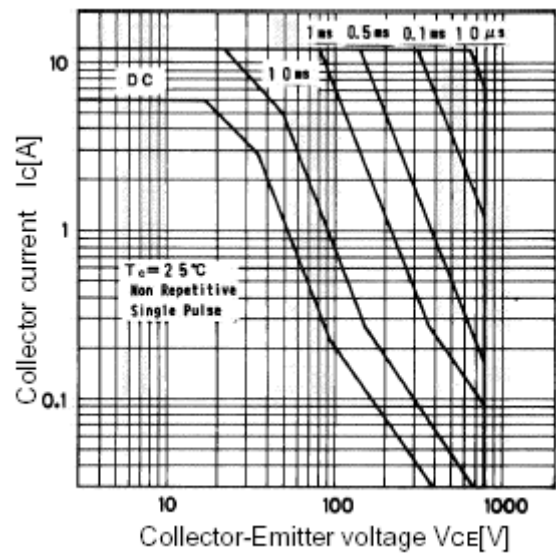


Fig.6 Safe Operating Area