

Silicon NPN Power Transistors

2SC4274

DESCRIPTION

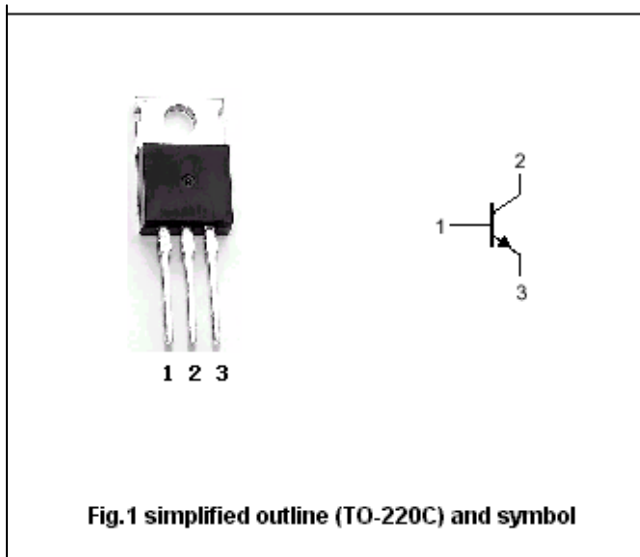
- With TO-220C package
- High voltage,high speed
- Low saturation voltage
- High reliability

APPLICATIONS

- Switching regulators
- DC-DC convertor
- Solid state relay
- General purpose power amplifiers

PINNING

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



Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	500	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	10	V
I_C	Collector current		10	A
I_B	Base current		3	A
P_C	Collector dissipation		40	W
T_j	Junction temperature		150	°C
T_{stg}	Storage temperature		-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal resistance junction case	3.0	°C/W

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =1mA ; I _E =0	500			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =0.2A ; I _B =0	400			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =1mA ; I _C =0	10			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =4A ; I _B =0.8A			0.8	V
V _{BEsat}	Base-emitter saturation voltage	I _C =4A ; I _B =0.8A			1.2	V
I _{CBO}	Collector cut-off current	V _{CB} =450V ; I _E =0			100	μ A
I _{EBO}	Emitter cut-off current	V _{EB} =10V ; I _C =0			100	μ A
h _{FE}	DC current gain	I _C =1A ; V _{CE} =5V	25		55	

Switching times

t _{on}	Turn-on time	V _{CC} =200V ; I _C =5A I _{B1} =0.5A ; I _{B2} =-1A ; R _L =30 Ω			1.0	μ s
t _{stg}	Storage time				2.5	μ s
t _f	Fall time				0.5	μ s

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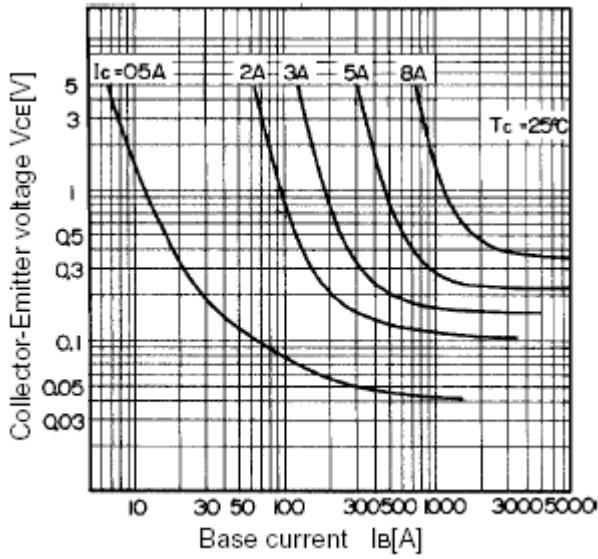


Fig.3 Static Characteristic

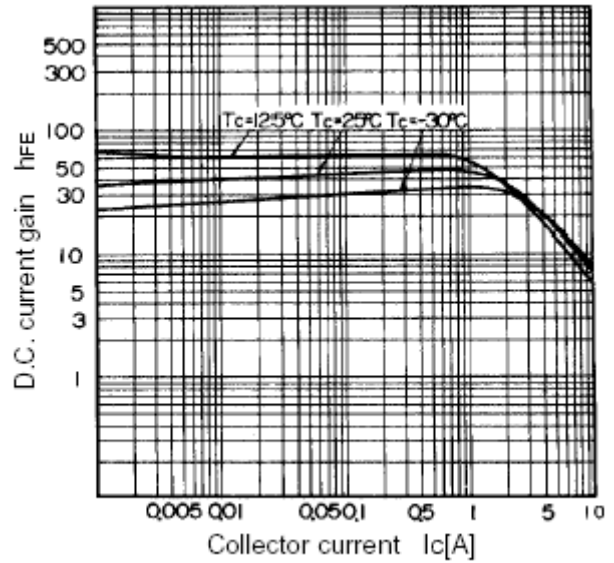


Fig.4 DC current Gain

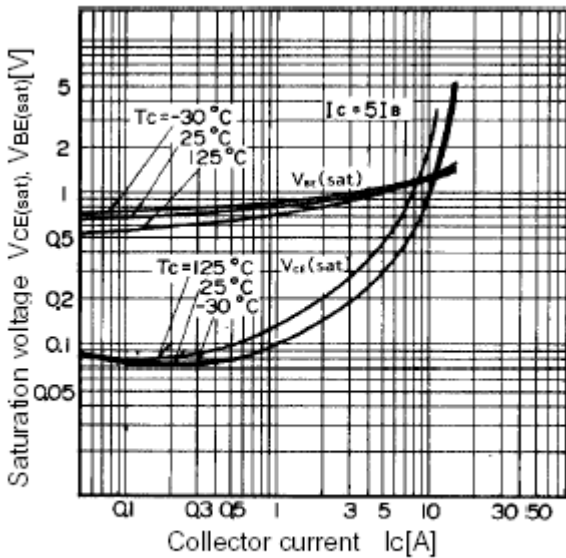


Fig.5 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

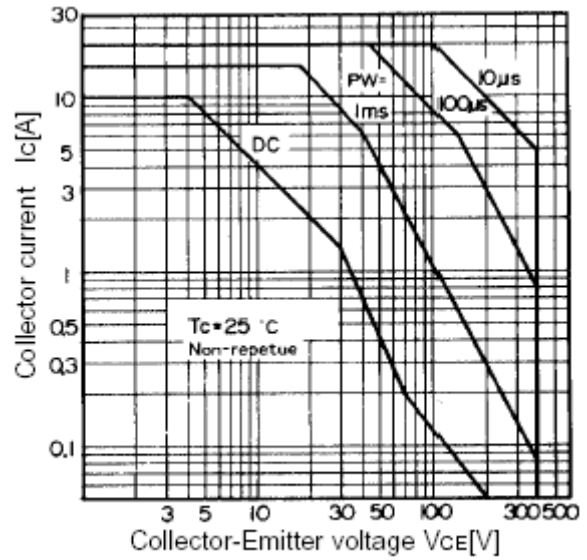


Fig.6 Safe Operating Area