

Inchange Semiconductor

Product Specification

Silicon NPN Power Transistors

2SC2816

DESCRIPTION

- With TO-220C package
- High voltage
- High speed

APPLICATIONS

- For high voltage ,high speed and high power switching applications

PINNING

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

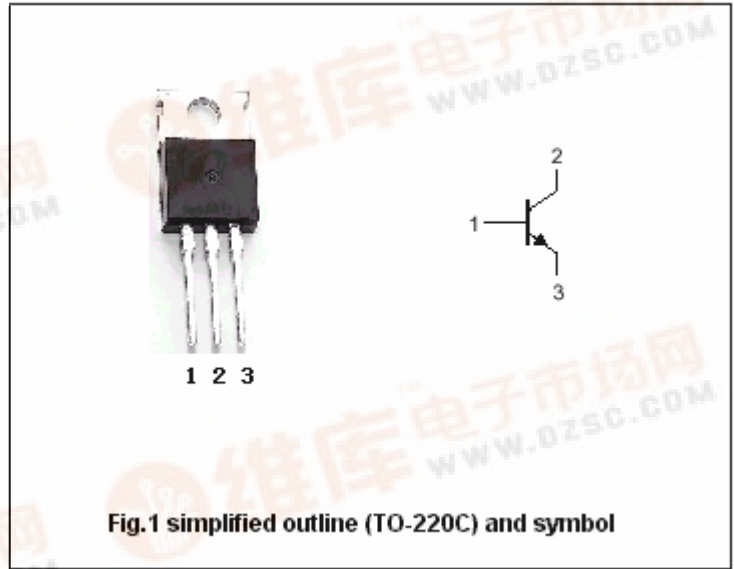


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25 °C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	500	V
V _{CEO}	Collector-emitter voltage	Open base	400	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current		5	A
I _{CM}	Collector current-peak		10	A
I _B	Base current		2.5	A
P _C	Collector power dissipation	T _C =25	40	W
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.2A ; R _{BE} = ; L=100mH	400			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =10mA ; I _C =0	7			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =2.5A; I _B =0.5A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2.5A; I _B =0.5A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =400V ; I _E =0			50	μA
I _{CEO}	Collector cut-off current	V _{CE} =350V ; R _{BE} =			50	μA
h _{FE-1}	DC current gain	I _C =2.5 A ; V _{CE} =5V	15			
h _{FE-2}	DC current gain	I _C =5 A ; V _{CE} =5V	7			
Switching times						
t _{on}	Turn-on time	I _C =5A; I _{B1} =-I _{B2} =1A V _{CC} =150V			0.5	μs
t _s	Storage time				1.5	μs
t _f	Fall time				0.5	μs

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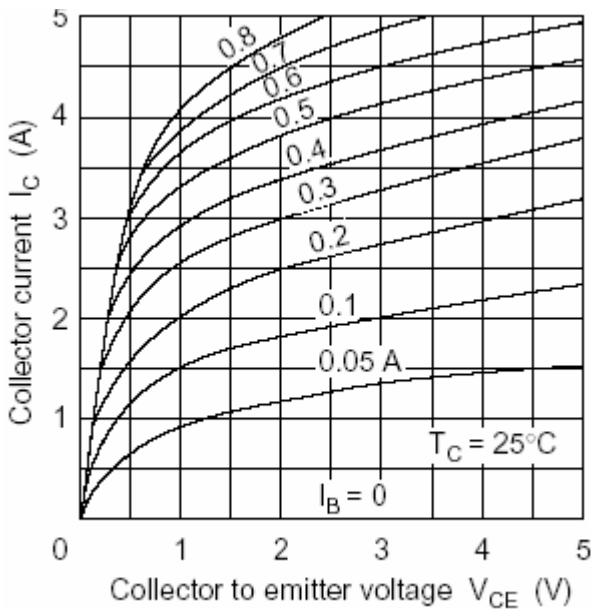


Fig.3 Static Characteristic

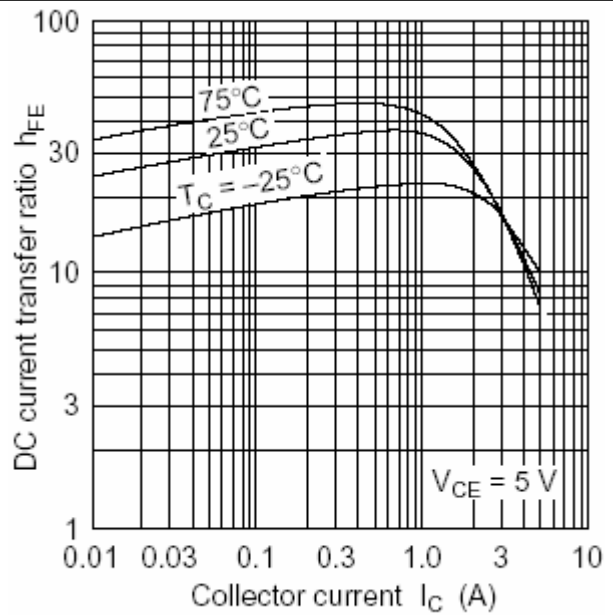


Fig.4 DC current Gain

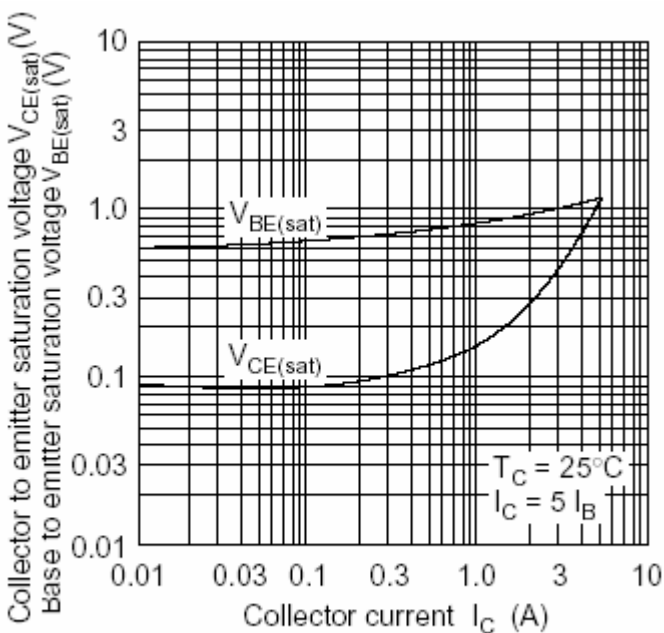


Fig.5 Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage

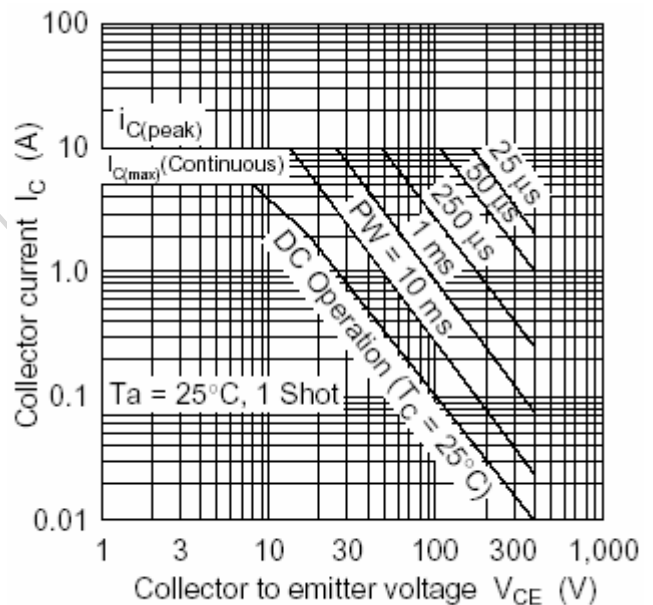


Fig.6 Safe Operating Area