

Silicon NPN Power Transistors

2SC2816

DESCRIPTION

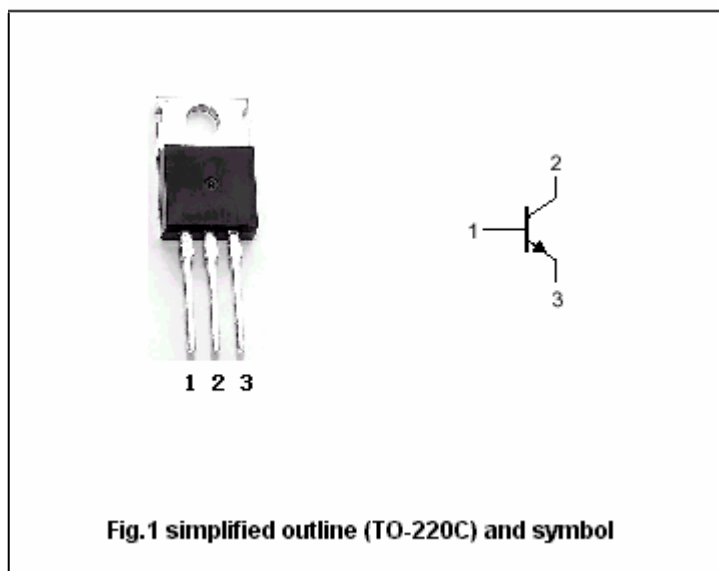
- With TO-220C package
- High voltage
- High speed

APPLICATIONS

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

PINNING

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

Absolute maximum ratings($T_a=25^\circ\text{C}$)

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	$T_C=25^\circ\text{C}$	40	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

Silicon NPN Power Transistors

2SC2816

CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(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

Silicon NPN Power Transistors

2SC2816

PACKAGE OUTLINE



Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

Silicon NPN Power Transistors

2SC2816

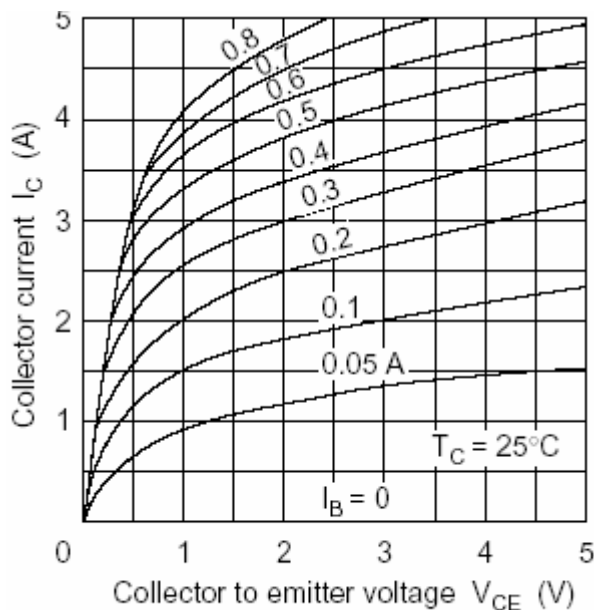


Fig.3 Static Characteristic

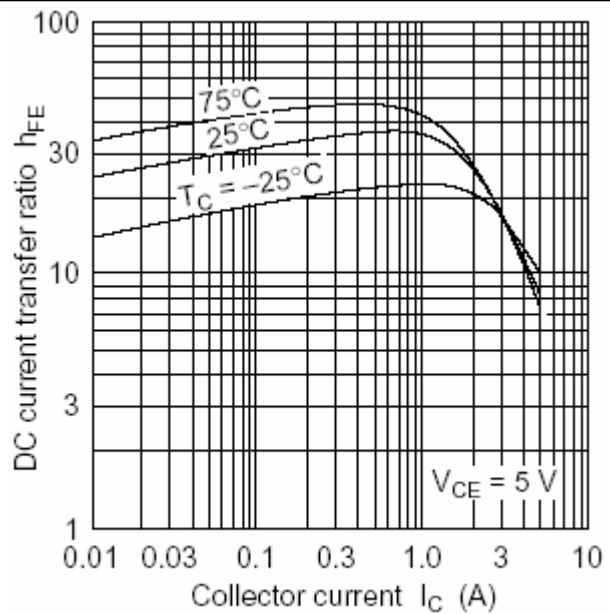


Fig.4 DC current Gain

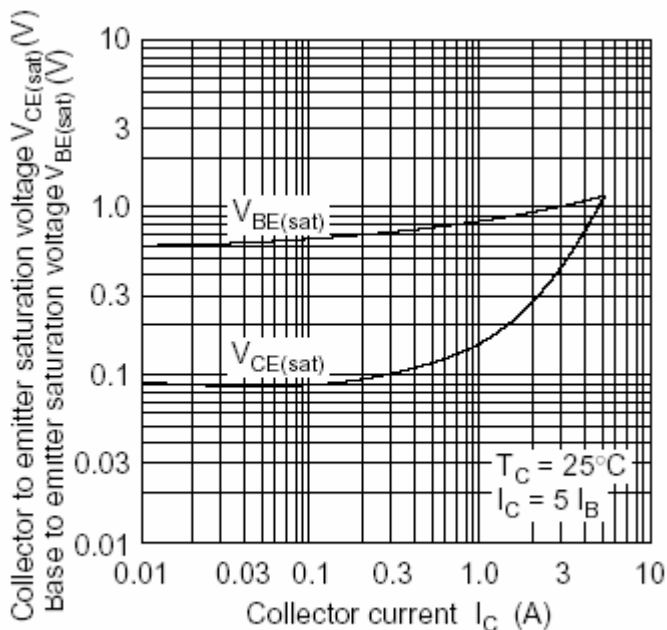
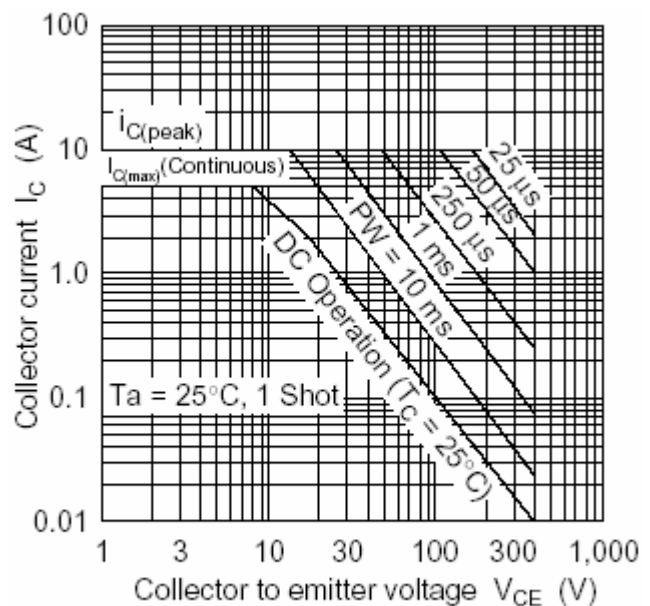
Fig.5 Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage

Fig.6 Safe Operating Area