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

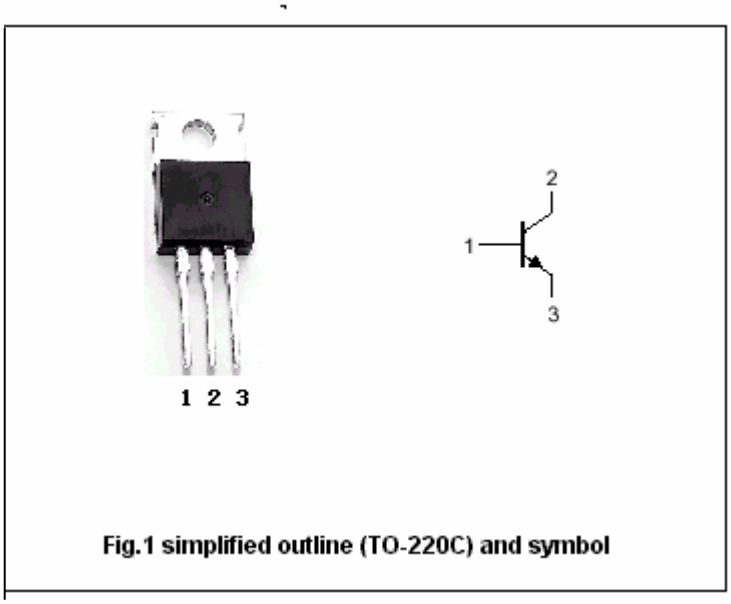


Fig.1 simplified outline (TO-220C) and symbol

PINNING

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

Absolute maximum ratings(Ta=25□)

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

Tj=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

PACKAGE OUTLINE

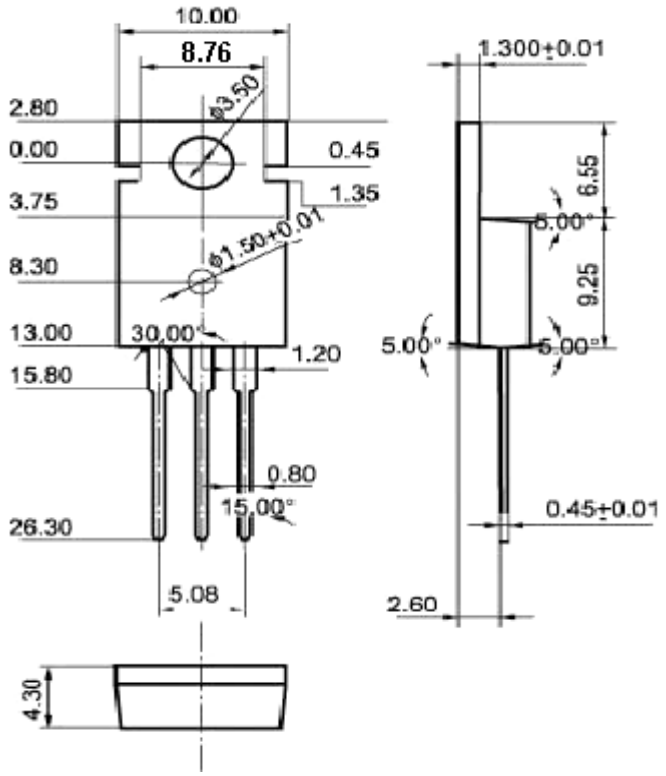


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

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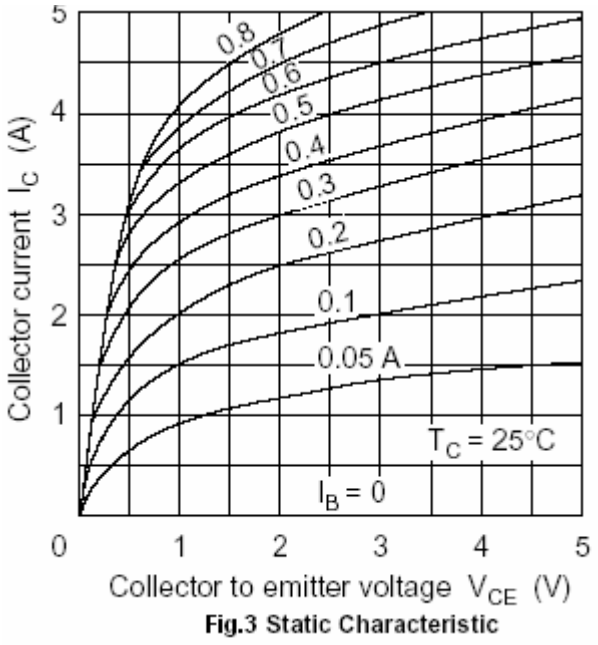


Fig.3 Static Characteristic

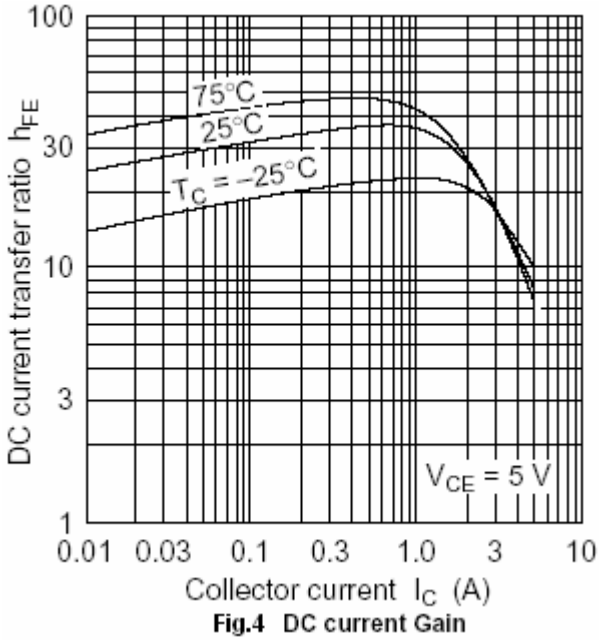


Fig.4 DC current Gain

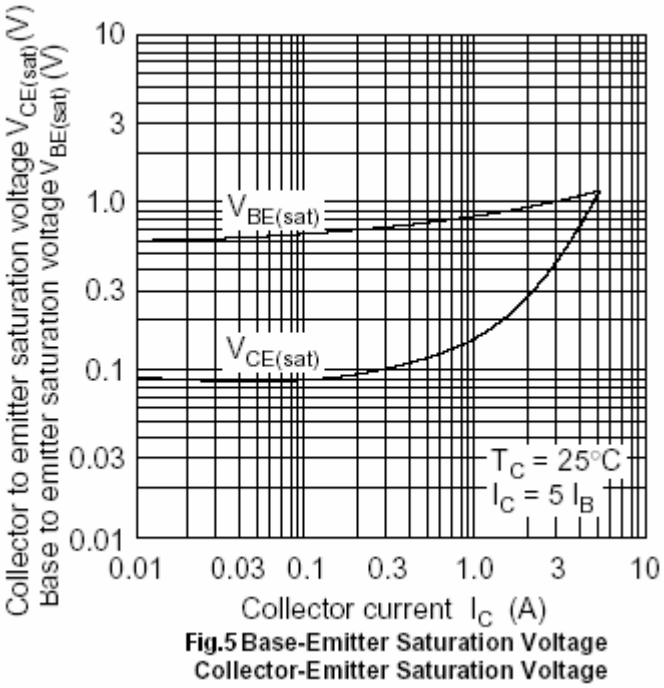


Fig.5 Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

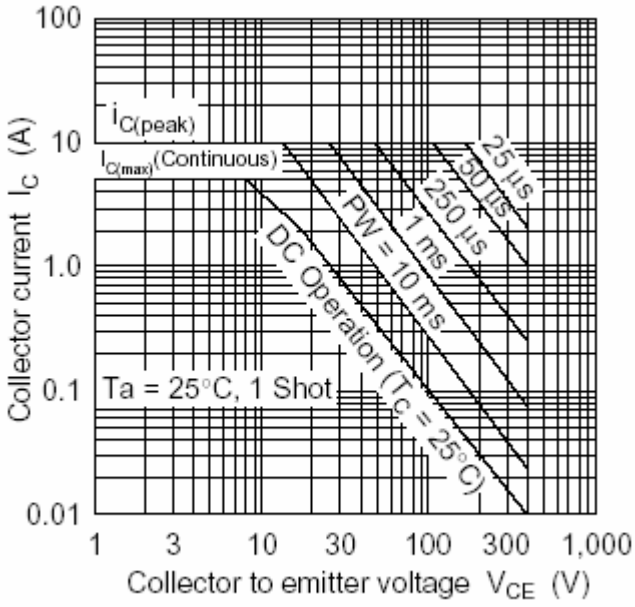


Fig.6 Safe Operating Area