Silicon NPN Power Transistors 2SC3317

DESCRIPTION

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

APPLICATIONS

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

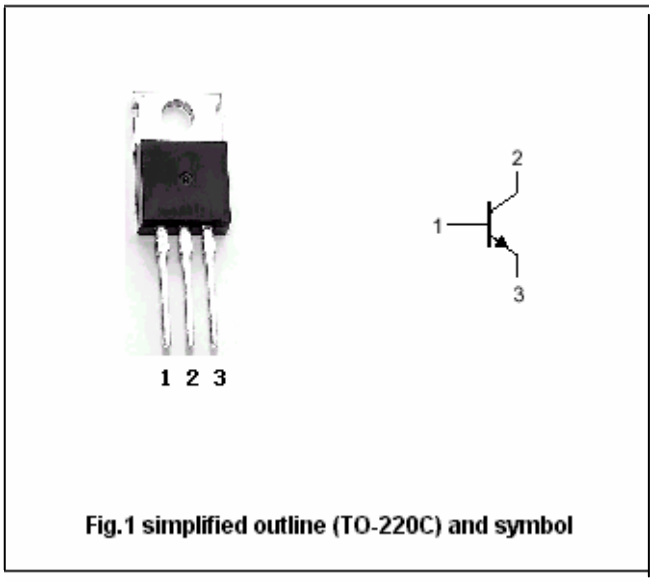

Fig.1 simplified outline (TO-220C) and symbol

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_B	Base current		2	A
P_C	Collector dissipation	T_C=25℃	40	W
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}C}$	Thermal resistance junction to case	3.13	℃/W

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CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA ; I_B=0	400			V
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	I_C=0.2A ; I_B=0	400			
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=1mA ; I_E=0	500			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=1mA ; I_B=0	7			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}=500V ;I_E=0			1	mA
I_{EBO}	Emitter cut-off current	V_{EB}=7V; I_C=0			1	mA
h_{FE}	DC current gain	I_C=2A ; V_{CE}=5V	10			

Switching times

t_{on}	Turn-on time	I_C=2.5AI_{B1}=0.5A; I_{B2}=-1A;R_L=60Ω Pw=20μs ;Duty≤2%			0.50	μs
t_{stg}	Storage time				1.50	μs
t_f	Fall time				0.15	μs

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PACKAGE OUTLINE

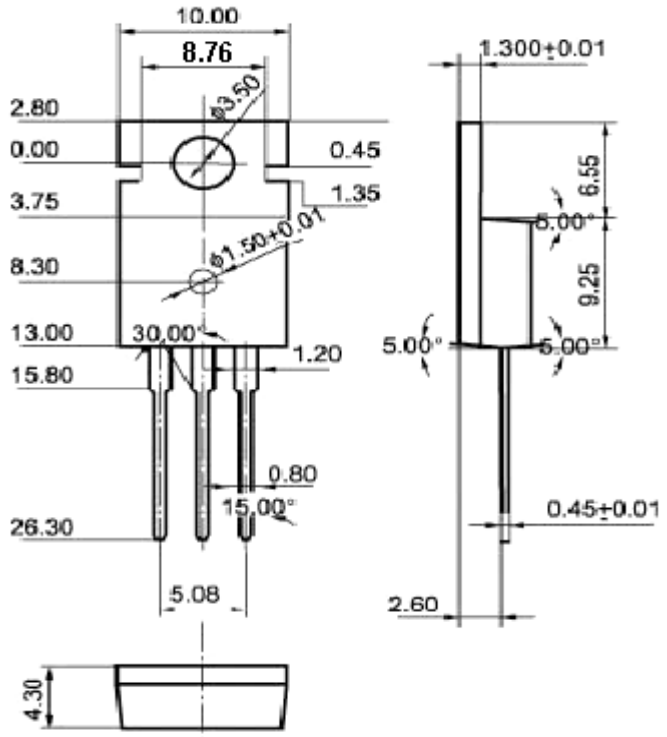

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

Silicon NPN Power Transistors 2SC3317

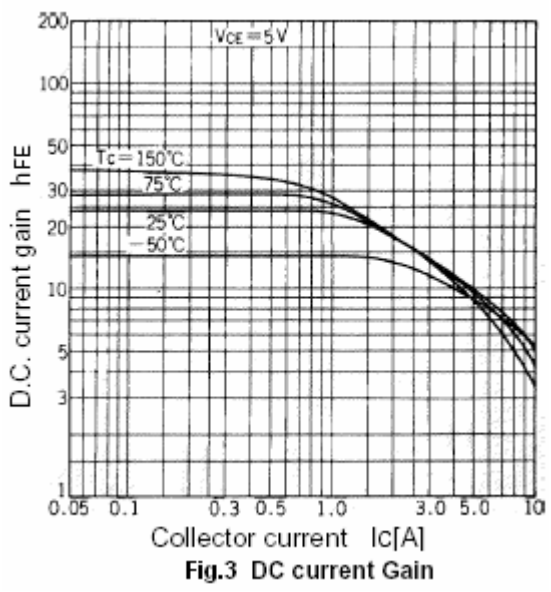

Fig.3 DC current Gain

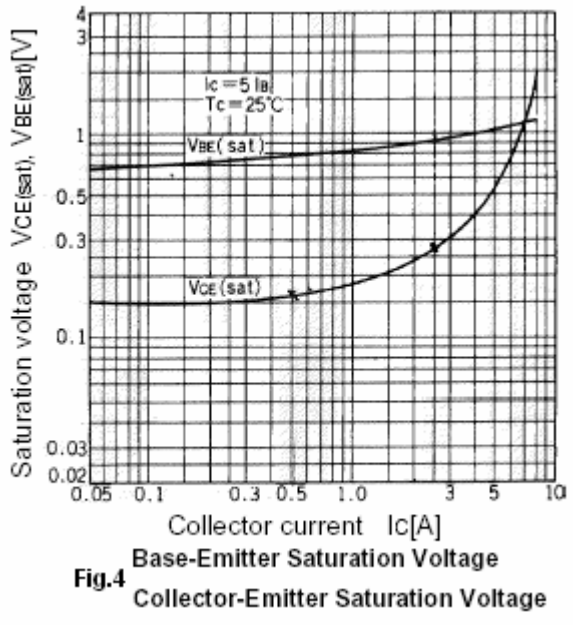

Fig.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

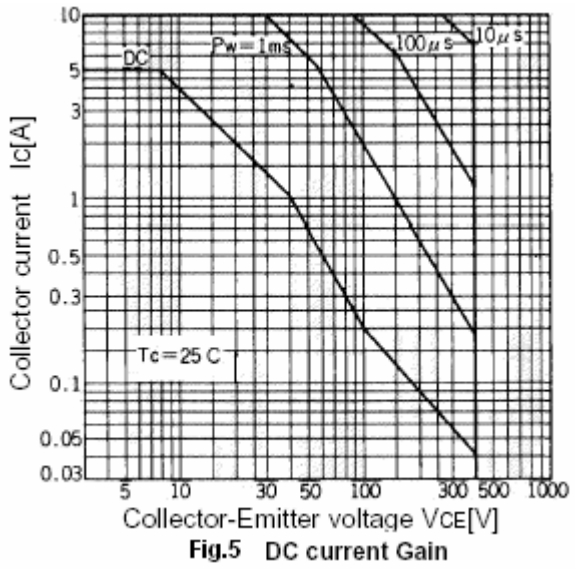

Fig.5 DC current Gain