

Silicon NPN Power Transistors

2SC3310

DESCRIPTION

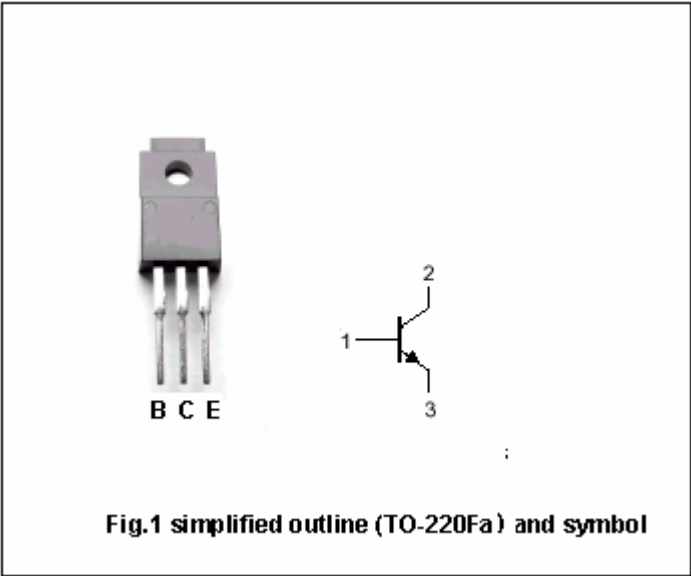
- With TO-220Fa package
- High collector breakdown voltage
- Excellent Switching times

APPLICATIONS

- Switching regulator
- High speed DC-DC converter
- High voltage switching

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
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 (DC)		5	A
I _{CM}	Collector current (pulse)		7	A
I _B	Base current (DC)		1	A
P _C	Collector power dissipation	T _a =25	2	W
		T _C =25	30	
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
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=1mA ; I_E=0$	500			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10mA ; I_B=0$	400			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=5A ; I_B=1A$			1.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=5A ; I_B=1A$			1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=400V ; I_E=0$			100	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=7V ; I_C=0$			1	mA
h_{FE-1}	DC current gain	$I_C=3A ; V_{CE}=5V$	12			
h_{FE-2}	DC current gain	$I_C=5A ; V_{CE}=5V$	8			

Switching times

T_r	Rise time	$I_C=4A ; I_{B1}=-I_{B2}=0.4A$ $V_{CC} \approx 200V ; R_L=10\Omega$			1.0	μs
t_s	Storage time				2.5	μs
t_f	Fall time				1.0	μs

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PACKAGE OUTLINE

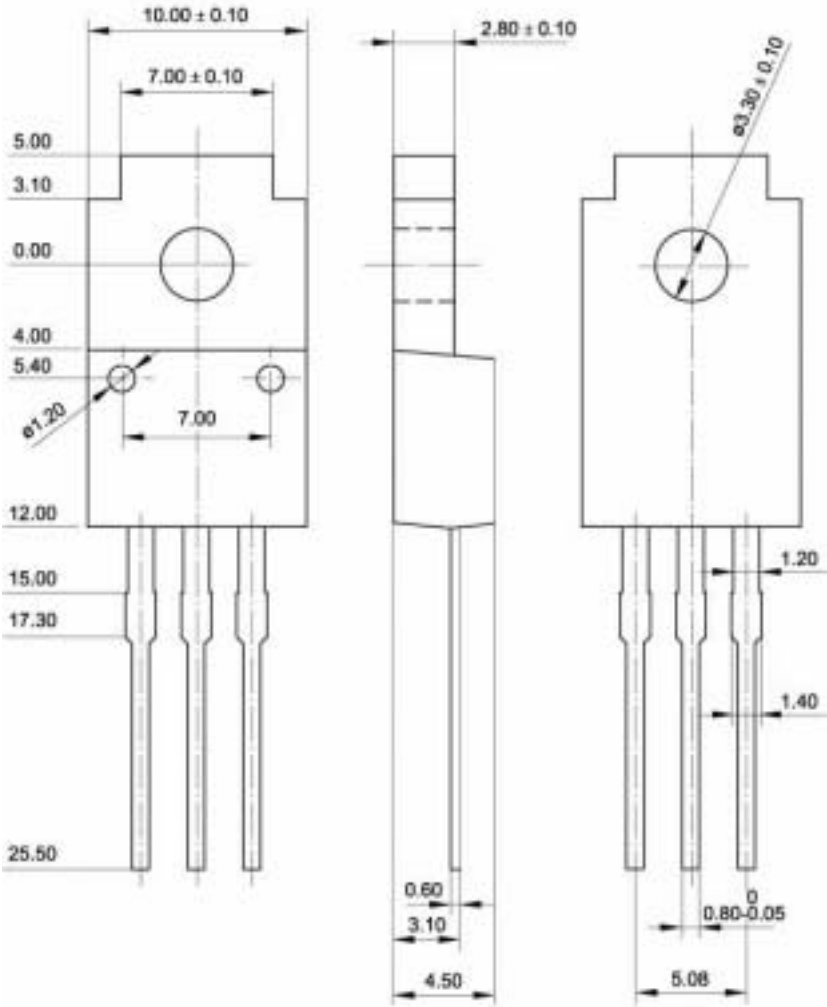


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)

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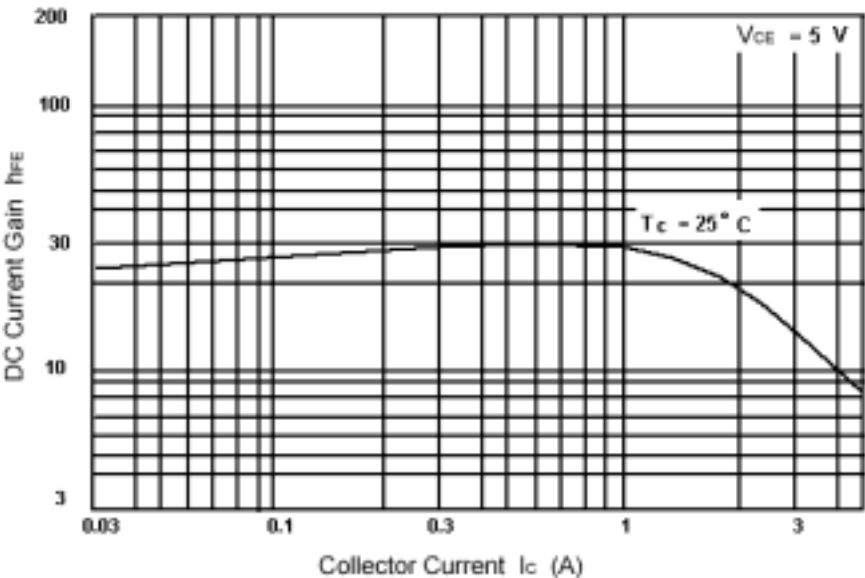


Fig.3 DC current Gain

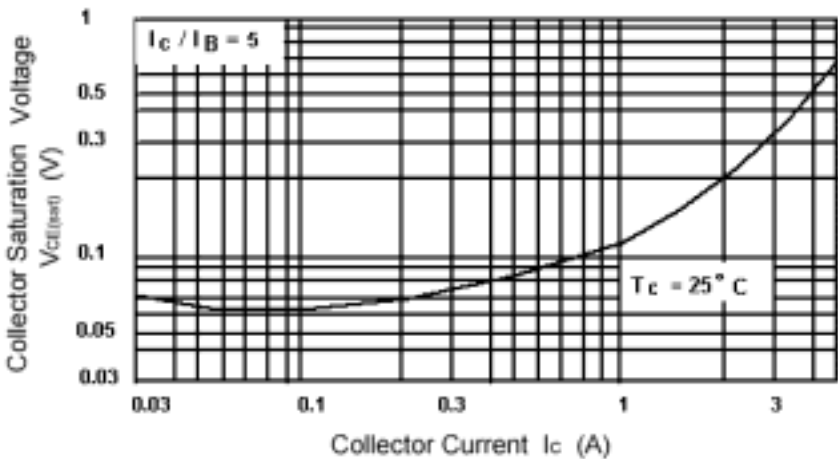


Fig.4 Collector-Emitter Saturation Voltage

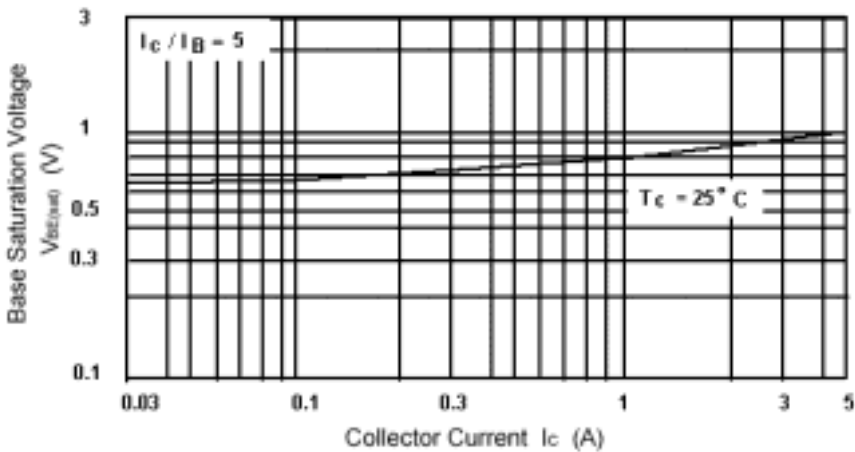


Fig.5 Base-Emitter Saturation Voltage

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