

Silicon NPN Power Transistors

2SC2344

DESCRIPTION

- With TO-220 package
- Complement to type 2SA1011

APPLICATIONS

- High voltage switching
- Audio frequency power amplifier;
- 100W output predriver applications

PINNING

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

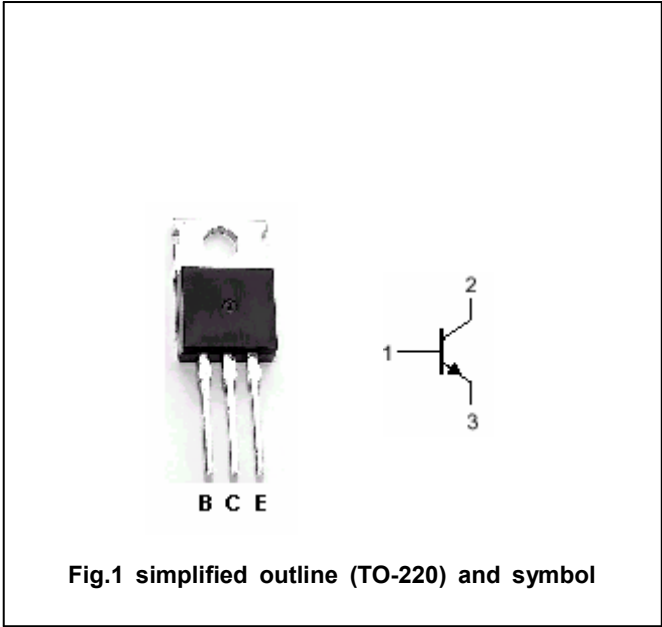


Fig.1 simplified outline (TO-220) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	180	V
V_{CEO}	Collector-emitter voltage	Open base	160	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		1.5	A
I_{CM}	Collector current-Peak		3.0	A
P_T	Total power dissipation	$T_C=25^{\circ}\text{C}$	25	W
T_j	Junction temperature		150	$^{\circ}\text{C}$
T_{stg}	Storage temperature		-55~150	$^{\circ}\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Base-emitter breakdown voltage	$I_C=10mA, R_{BE}=\infty$	160			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=1mA; I_E=0$	180			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1mA; I_C=0$	6			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=0.5A; I_B=50mA$		0.3		V
V_{BE}	Base-emitter voltage	$I_C=10mA; V_{CE}=5V$		1.5		V
I_{CBO}	Collector cut-off current	$V_{CB}=120V; I_E=0$			10	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=4V; I_C=0$			10	μA
h_{FE}	DC current gain	$I_C=0.3A; V_{CE}=5V$	60		200	
f_T	Transition frequency	$I_C=50mA; V_{CE}=10V$		100		MHz
C_{ob}	Output capacitance	$f=1MHz; V_{CB}=10V$		23		pF

Switching times resistive load

t_{on}	Turn-on time	$I_C=0.5A, I_{B1}=-I_{B2}=50mA$		0.15		μs
t_s	Storage time			0.81		μs
t_f	Fall time			0.48		μs

◆ h_{FE} Classifications

D	E
60-120	100-200

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PACKAGE OUTLINE

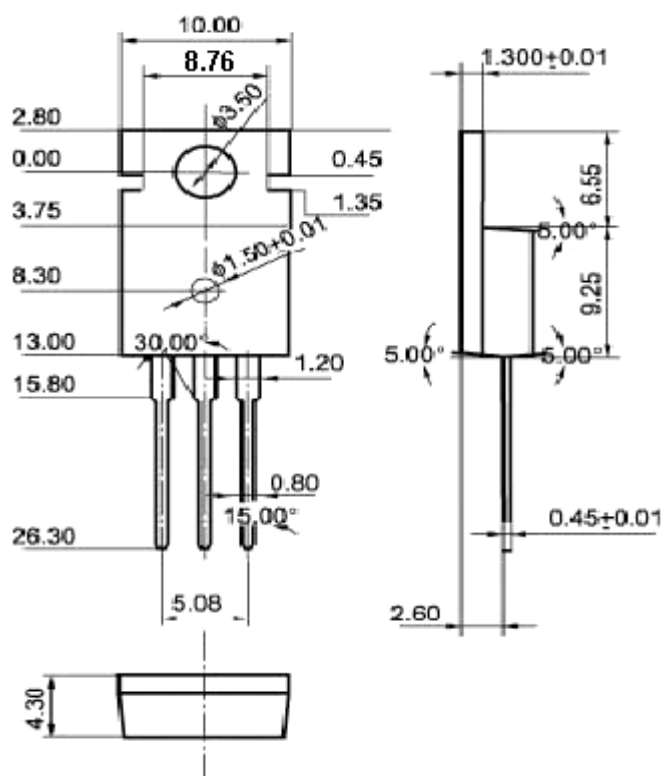


Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)

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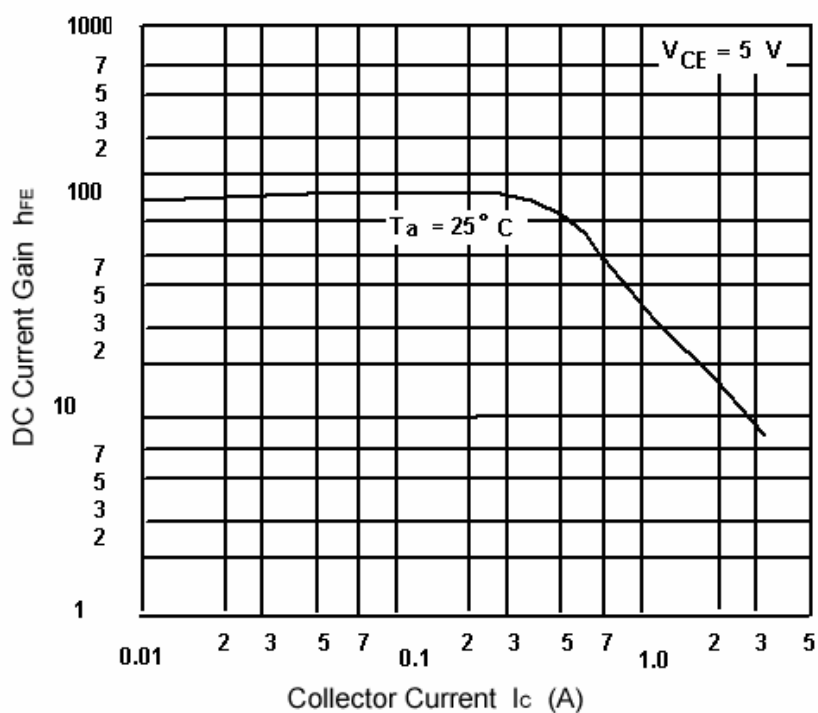


Fig.3 DC current Gain

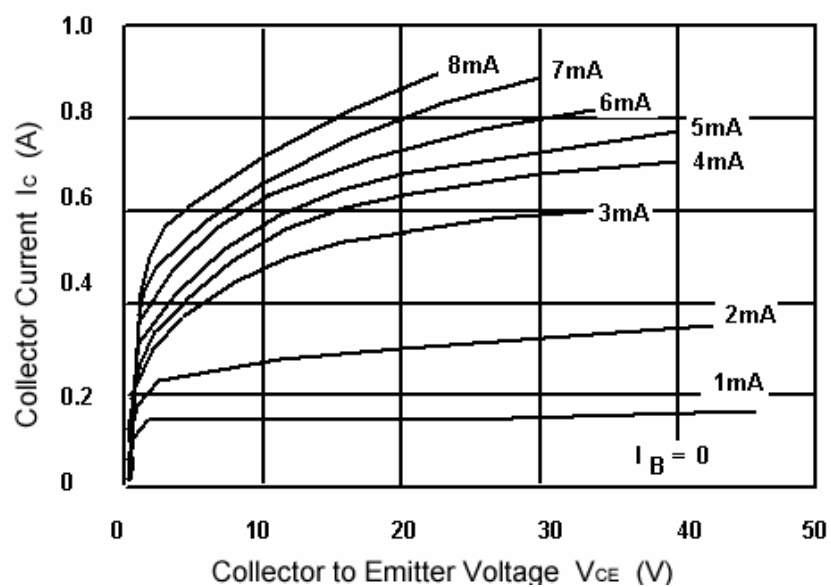


Fig.4 Static Characteristic

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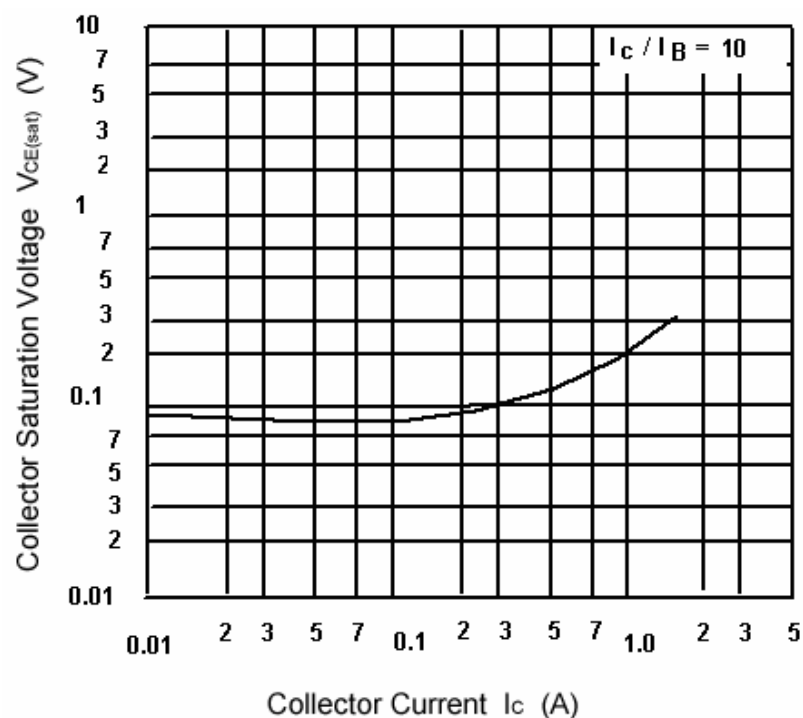


Fig.5 Collector-Emitter Saturation Voltage

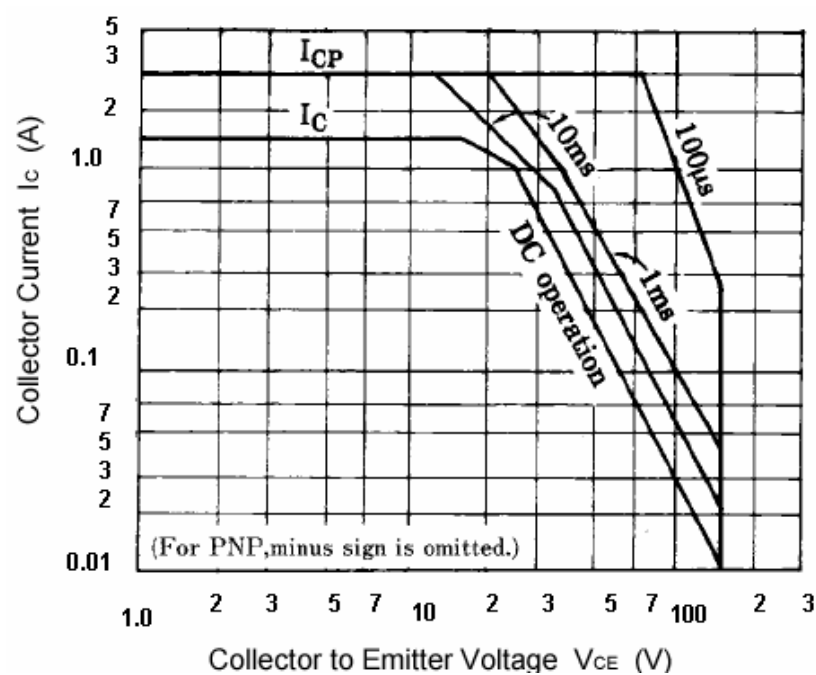


Fig.6 Safe Operating Area