

Silicon NPN Power Transistors

2SC2334

DESCRIPTION

- With TO-220 package
- Complement to type 2SA1010
- Low collector saturation voltage
- Fast switching speed

APPLICATIONS

- Switching regulators
- DC/DC converters
- High frequency power amplifiers

PINNING

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

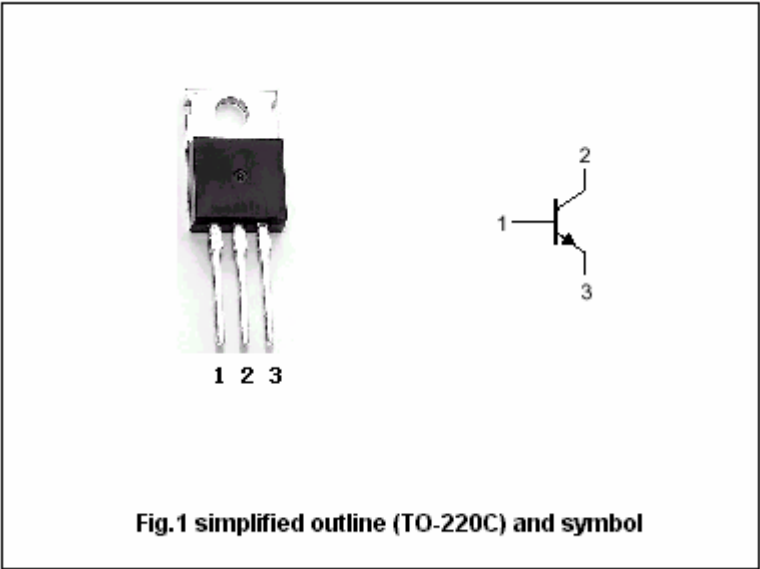


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	150	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		7	A
I_{CM}	Collector current-peak		15	A
I_B	Base current		3.5	A
P_T	Total power dissipation	$T_a=25^{\circ}C$	1.5	W
		$T_C=25^{\circ}C$	40	
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	$I_C=5.0A, I_B=0.5A, L=1mH$	100			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=5A; I_B=0.5A$			0.6	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=5A; I_B=0.5A$			1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=100V; I_E=0$			10	μA
I_{CEX}	Collector cut-off current	$V_{CE}=100V; V_{BE(off)}=-1.5V$ $T_a=125^\circ C$			10 1.0	μA mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V; I_C=0$			10	μA
h_{FE-1}	DC current gain	$I_C=0.5A; V_{CE}=5V$	40			
h_{FE-2}	DC current gain	$I_C=3A; V_{CE}=5V$	40		200	
h_{FE-3}	DC current gain	$I_C=5A; V_{CE}=5V$	20			

Switching times resistive load

t_{on}	Turn-on time	$I_C=5.0A, I_{B1}=-I_{B2}=0.5A$ $R_L=10\Omega; V_{CC}\approx 50V$			0.5	μs
t_s	Storage time				1.5	μs
t_f	Fall time				0.5	μs

◆ h_{FE-2} Classifications

M	L	K
40-80	60-120	100-200

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PACKAGE OUTLINE

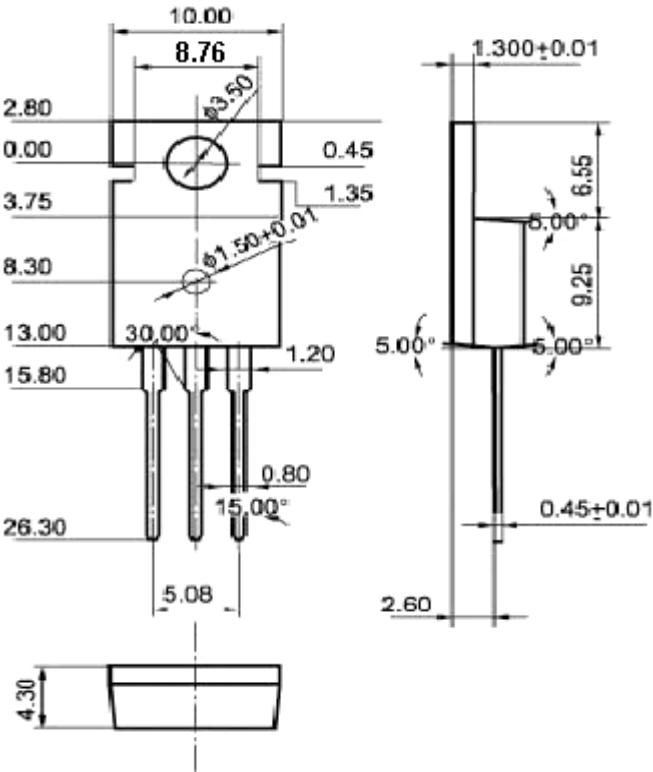


Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)

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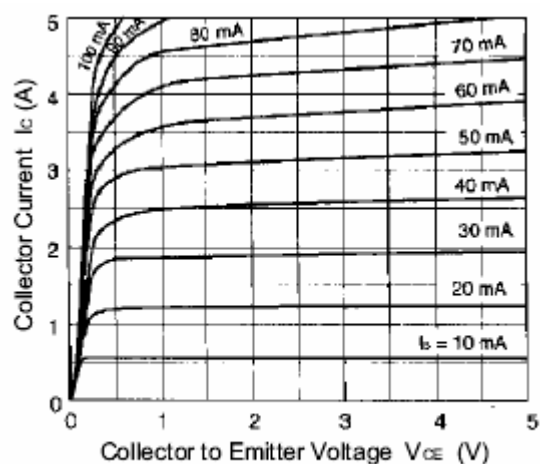


Fig.3 Static Characteristic

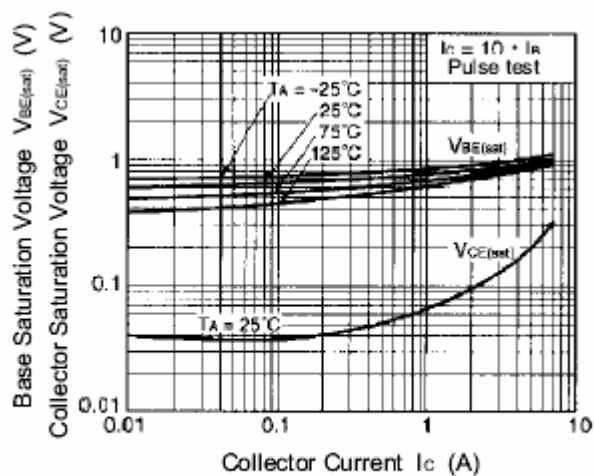
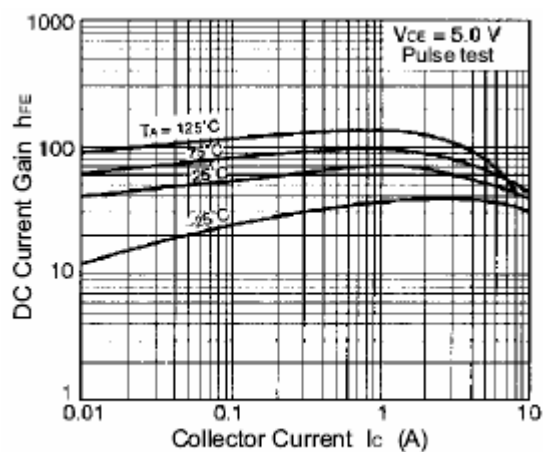
Fig.4 Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage

Fig.5 DC current Gain

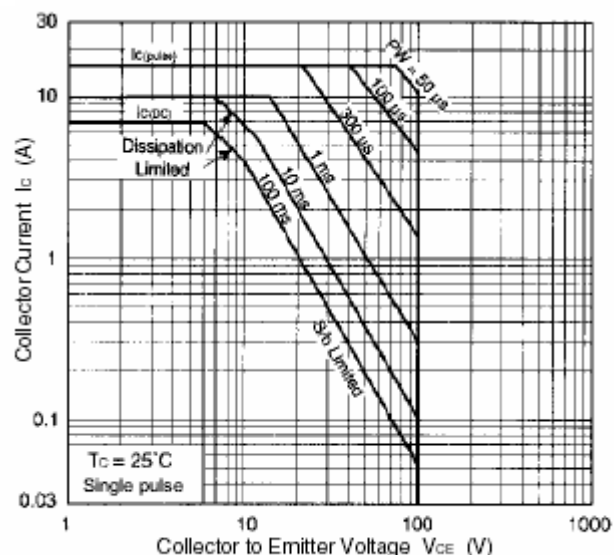


Fig.6 Safe Operating Area