

Silicon NPN Power Transistors

2SC2333

DESCRIPTION

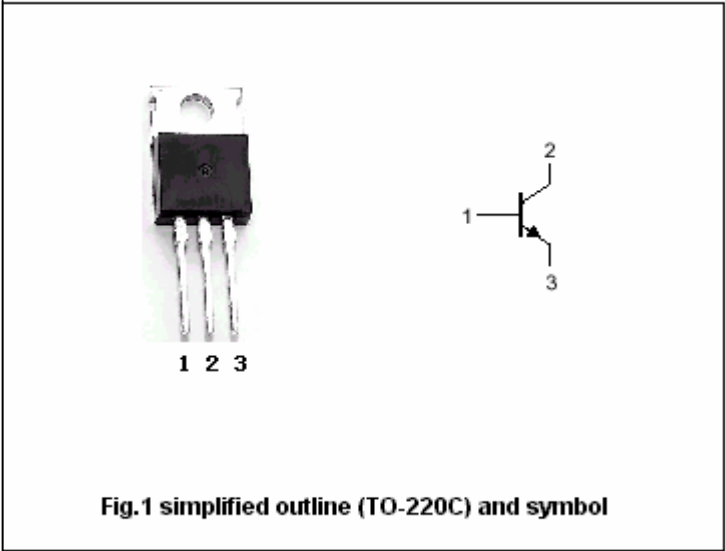
- With TO-220C package
- High speed switching
- Low collector saturation voltage

APPLICATIONS

- Switching regulator
- DC-DC converter
- Ultrasonic appliance

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		2	A
I_{CM}	Collector current-peak		4	A
I_B	Base current		1	A
P_T	Total power dissipation	$T_C=25$	15	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	$I_C=0.5A; I_B=0.1A; L=1mA$	400			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=0.5A; I_B=0.1A$			1.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=0.5A; I_B=0.1A$			1.2	V
I_{CER}	Collector cut-off current	$V_{CE}=400V; R_{BE}=51\Omega; T_a=125$			1.0	mA
I_{CEX1}	Collector cut-off current	$V_{CE}=400V; V_{BE(OFF)}=-5.0V$			10	μA
I_{CEX2}	Collector cut-off current	$V_{CE}=400V; V_{BE(OFF)}=-5.0V; T_a=125$			1.0	mA
I_{CBO}	Collector cut-off current	$V_{CB}=400V; I_E=0$			10	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V; I_C=0$			10	μA
h_{FE-1}	DC current gain	$I_C=0.1A; V_{CE}=5V$	20		80	
h_{FE-2}	DC current gain	$I_C=0.5A; V_{CE}=5V$	10			
t_{on}	Turn on time	$I_C=0.5A; I_{B1}=-I_{B2}=0.1A; R_L=300\Omega; V_{CC}=150V$			1.0	μs
t_{stg}	Storage time				2.5	μs
t_f	Fall time				1.0	μs

◆ h_{FE-1} classifications

M	L	K
20-40	30-60	40-80

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PACKAGE OUTLINE

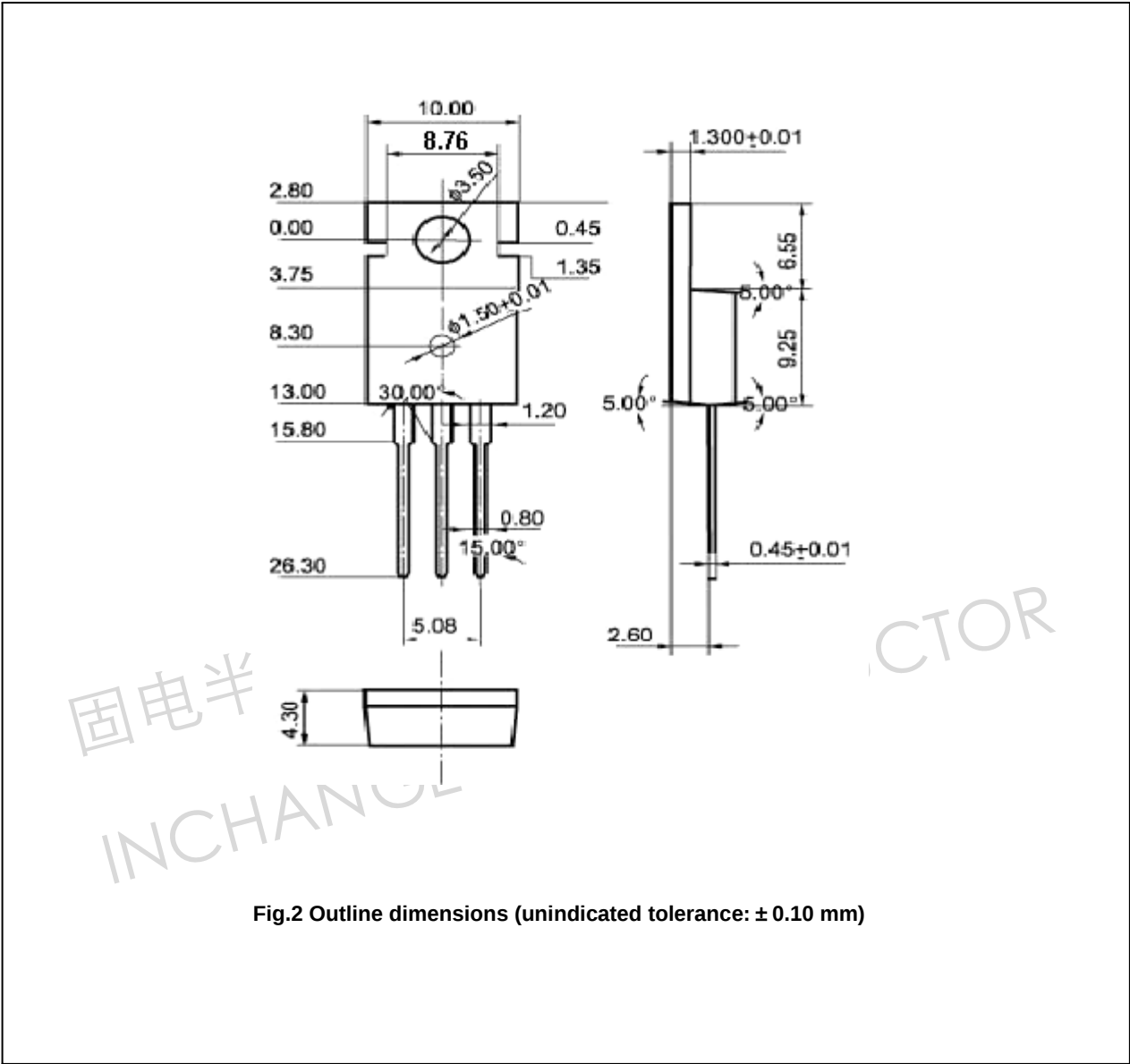


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)

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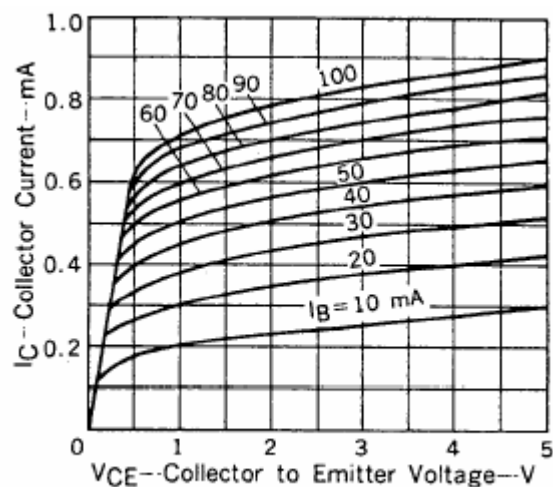


Fig.3 Static Characteristic

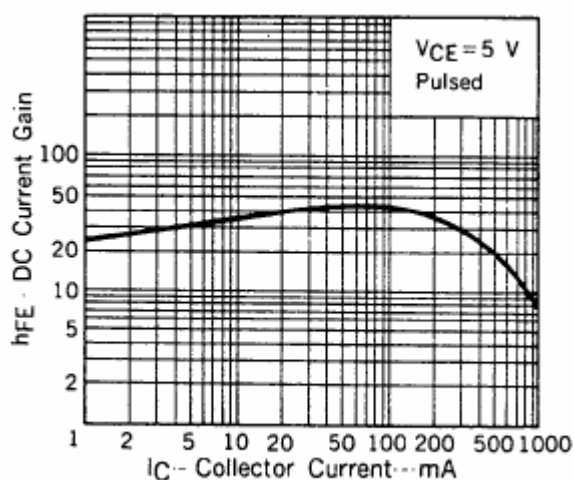


Fig.4 DC current Gain

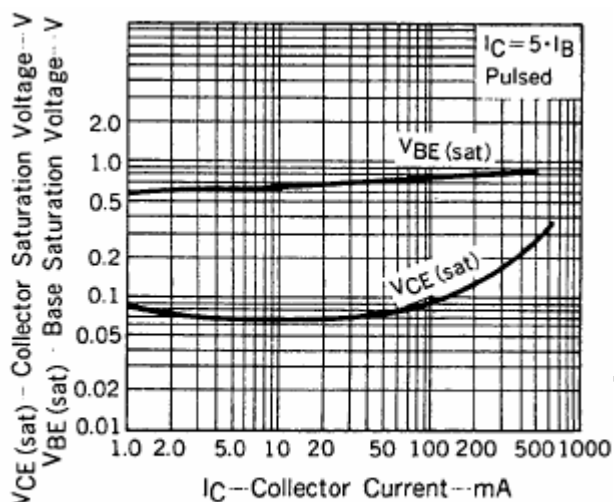
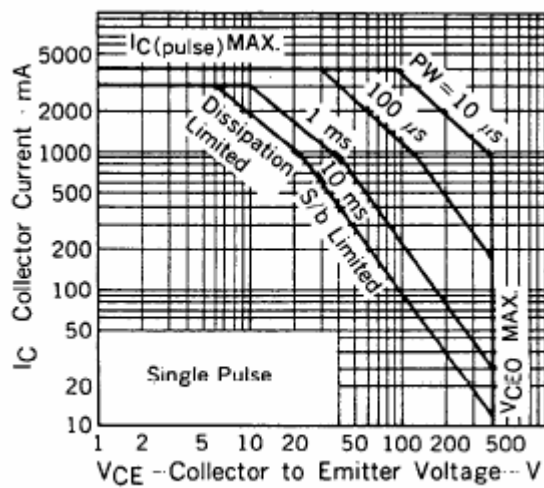
Fig.5 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

Fig.6 Safe Operating Area