

Silicon NPN Power Transistors

2SC2333

DESCRIPTION

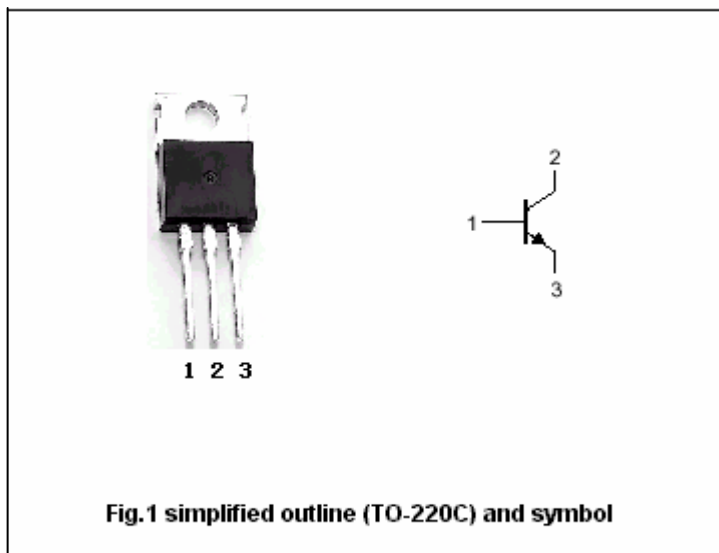
- With TO-220C package
- High speed switching
- Low collector saturation voltage

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°C)

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	$T_C=25^\circ\text{C}$	15	W
T_j	Junction temperature		150	°C
T_{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

T_j=25 °C 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} =51Ω; T _a =125 °C			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 °C			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 =300Ω; 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

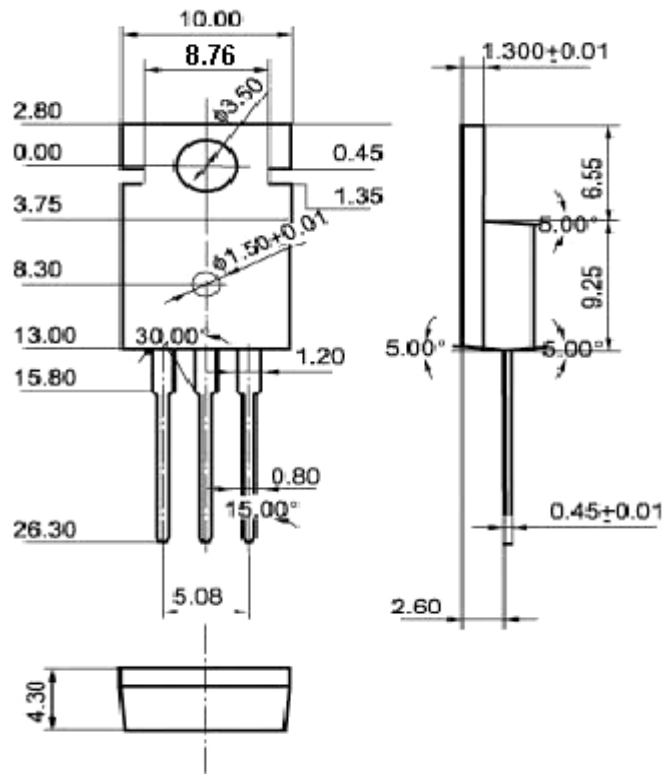


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)

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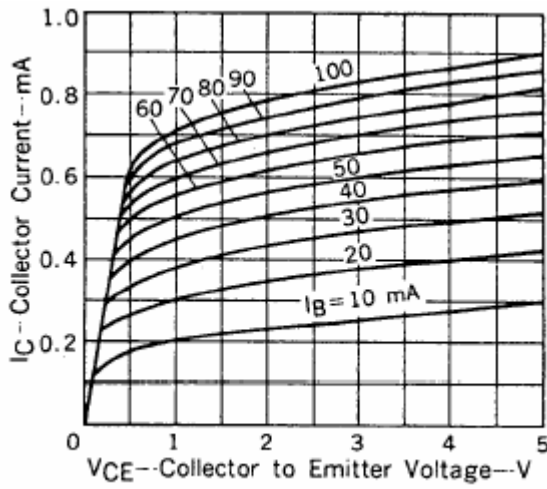


Fig.3 Static Characteristic

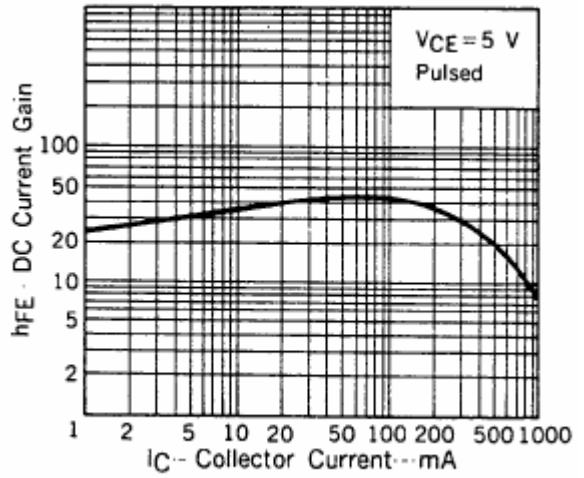


Fig.4 DC current Gain

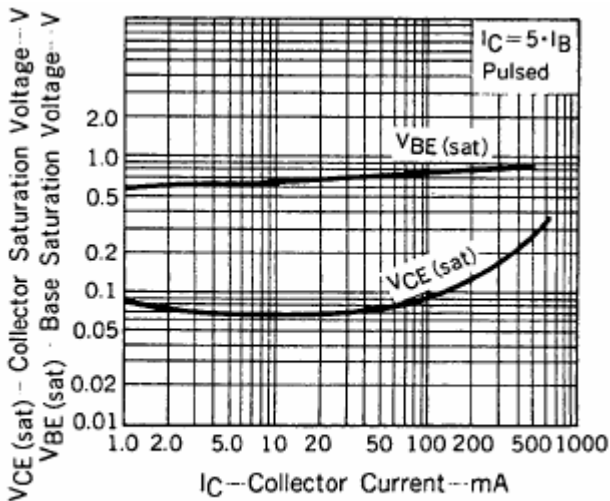


Fig.5 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

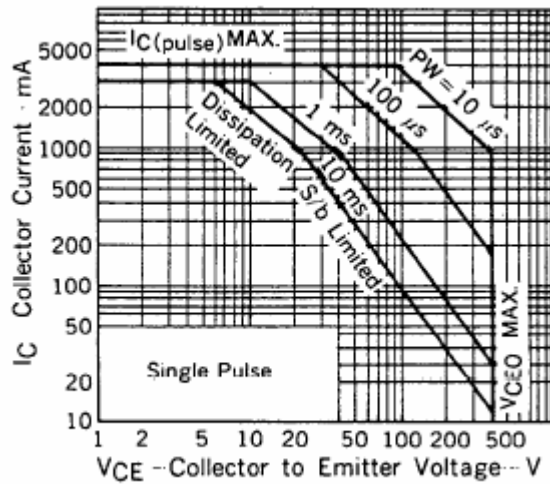


Fig.6 Safe Operating Area