

Silicon NPN Power Transistors

2SC3345

DESCRIPTION

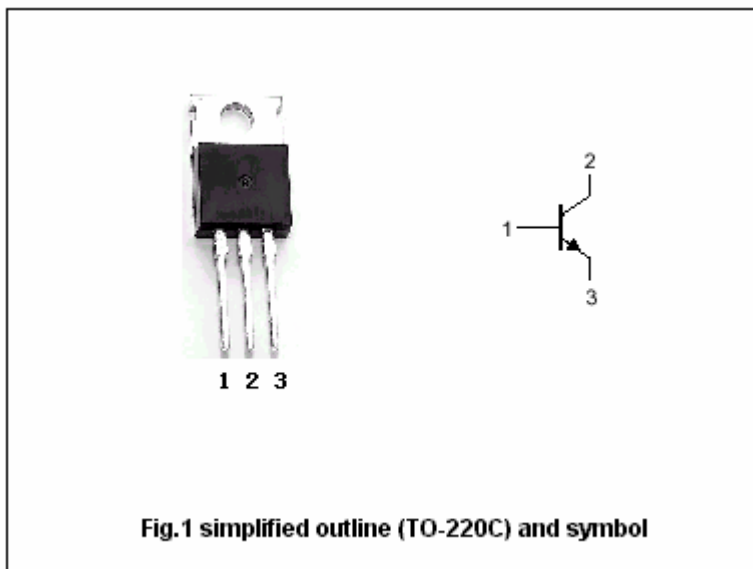
- With TO-220 package
- Complement to type 2SA1328
- Low collector saturation voltage
- High speed switching time

APPLICATIONS

- High current switching applications

PINNING

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

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	60	V
V_{CEO}	Collector-emitter voltage	Open base	50	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		12	A
I_B	Base current		2	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	40	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =50mA, I _B =0	50			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =6A; I _B =0.3A			0.4	V
V _{BEsat}	Base-emitter saturation voltage	I _C =6A; I _B =0.3A			1.2	V
I _{CBO}	Collector cut-off current	V _{CB} =60V; I _E =0			10	μA
I _{EBO}	Emitter cut-off current	V _{EB} =6V; I _C =0			10	μA
h _{FE-1}	DC current gain	I _C =1A; V _{CE} =1V	70		240	
h _{FE-2}	DC current gain	I _C =6A; V _{CE} =1V	40			
C _{ob}	Output capacitance	I _E =0; V _{CB} =10V; f=1MHz		180		pF
f _T	Transition frequency	I _C =1A; V _{CE} =5V		90		MHz

Switching times

t _{on}	Turn-on time	I _C =6.0A I _{B1} =- I _{B2} =0.3A R _L =5Ω; V _{CC} =30V		0.2		μs
t _s	Storage time			1.0		μs
t _f	Fall time			0.2		μs

◆ h_{FE-1} Classifications

O	Y
70-140	120-240

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PACKAGE OUTLINE



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

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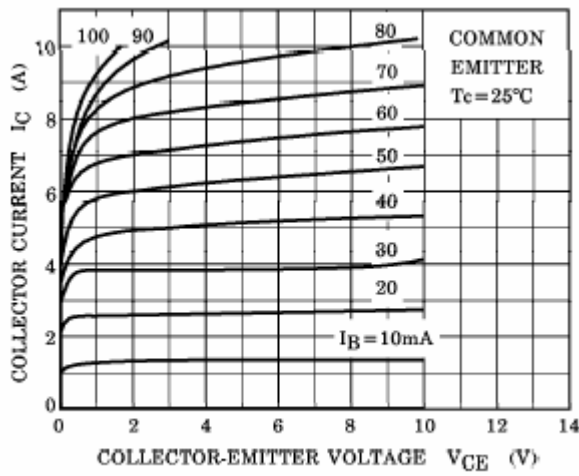


Fig.3 Static Characteristic

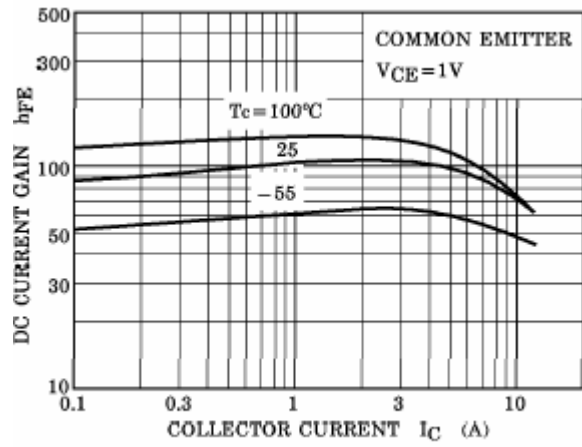


Fig.4 DC current Gain

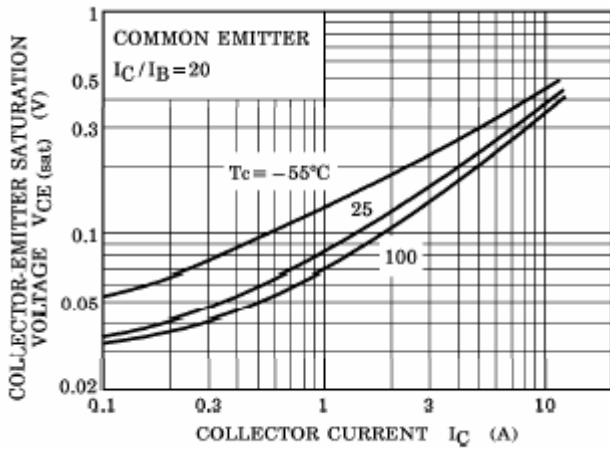


Fig.5 Collector-Emitter Saturation Voltage

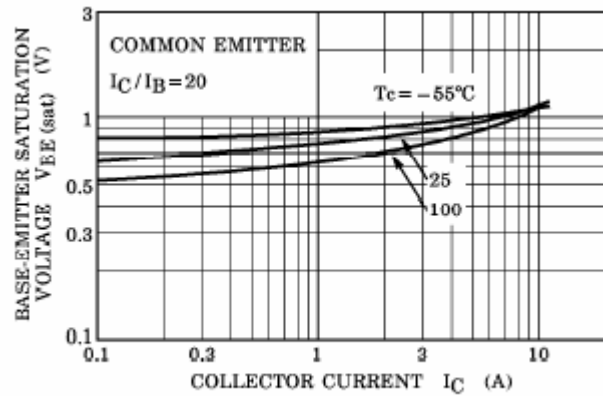


Fig.6 Base-Emitter Saturation Voltage

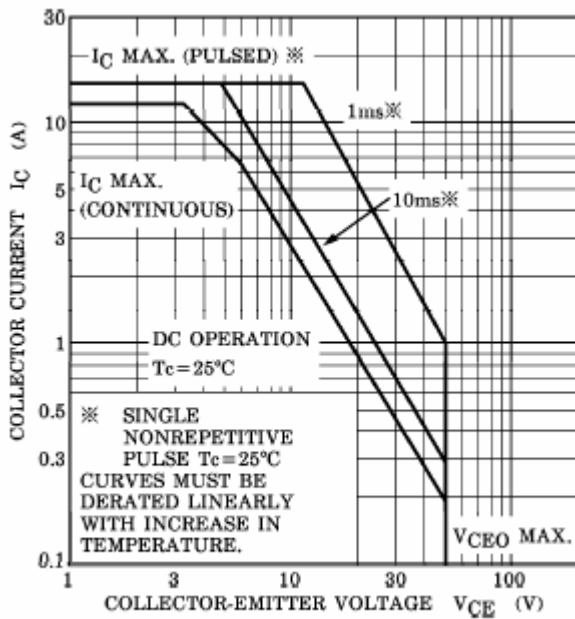


Fig.7 Safe Operating Area