

Silicon NPN Power Transistors

2SC3346

DESCRIPTION

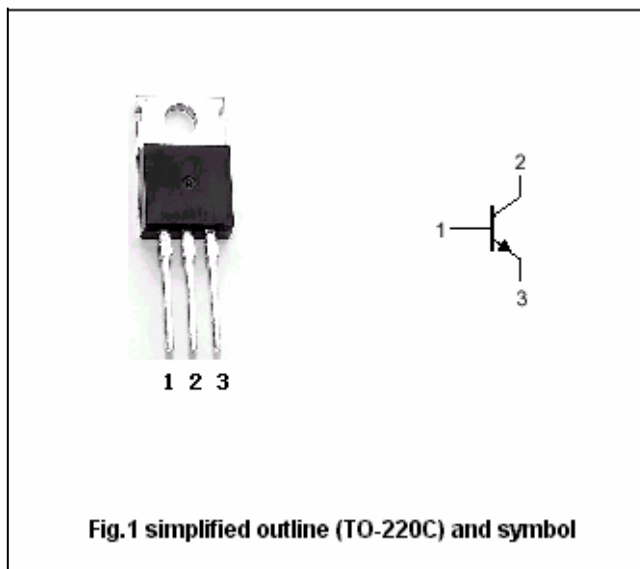
- With TO-220C package
- Complement to type 2SA1329
- High speed switching time
 - : $t_{stg}=1.0\mu s$ (Typ.)
- Low collector saturation voltage
 - : $V_{CE(sat)}=0.4V$ (Max.)@ $I_C=6A$

APPLICATIONS

- For high current switching applications

PINNING

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

Absolute maximum ratings($T_a=25^\circ$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	80	V
V_{CEO}	Collector-emitter voltage	Open base	80	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 dissipation	$T_C=25^\circ$	40	W
T_j	Junction temperature		150	$^\circ$
T_{stg}	Storage temperature		-55~150	$^\circ$

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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	80			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =6A; I _B =0.3A		0.2	0.4	V
V _{BEsat}	Base-emitter saturation voltage	I _C =6A; I _B =0.3A		0.9	1.2	V
I _{CBO}	Collector cut-off current	V _{CB} =80V ; 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			
f _T	Transition frequency	I _C =1A ; V _{CE} =5V		80		MHz
C _{OB}	Output capacitance	I _E =0 ; V _{CB} =10V, f=1MHz		220		pF

Switching times

T _{on}	Turn-on time	I _{B1} =-I _{B2} =0.3A; R _L =5Ω, V _{CC} =30V Pw=20μs ; Duty≤1%		0.2		μs
t _{stg}	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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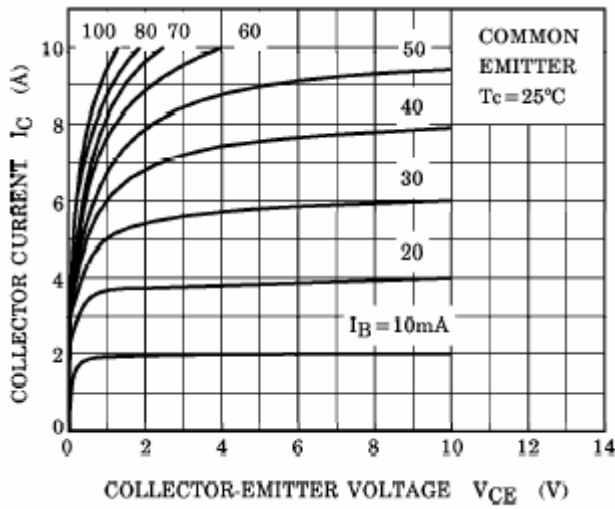


Fig.3 Static Characteristic

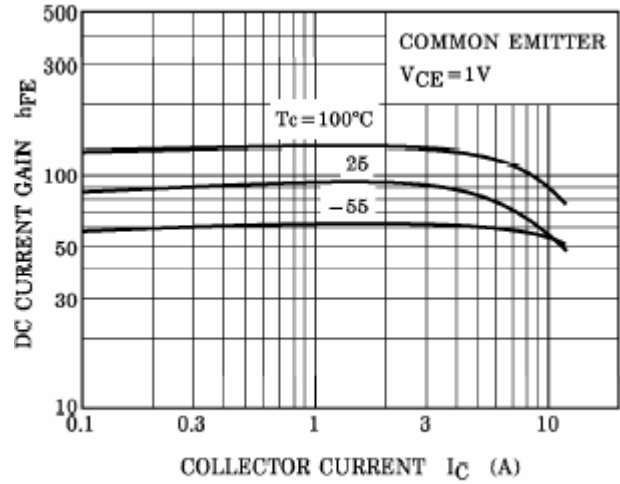


Fig.4 DC current Gain

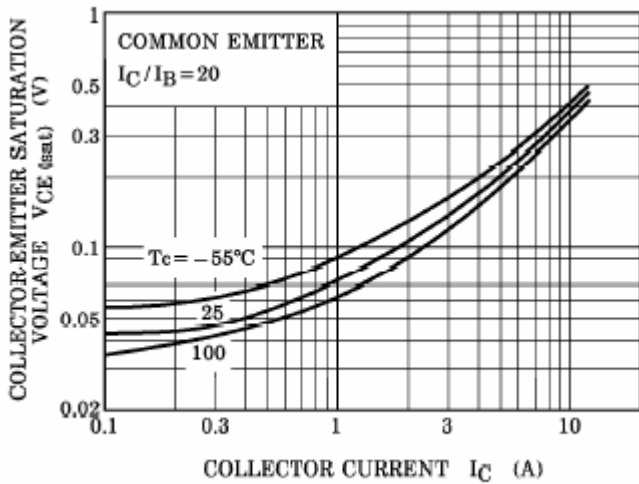


Fig.5 Collector-Emitter Saturation Voltage

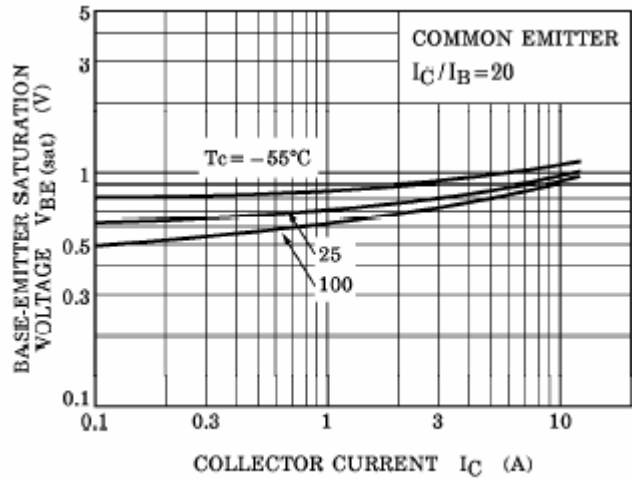


Fig.6 Base-Emitter Saturation Voltage

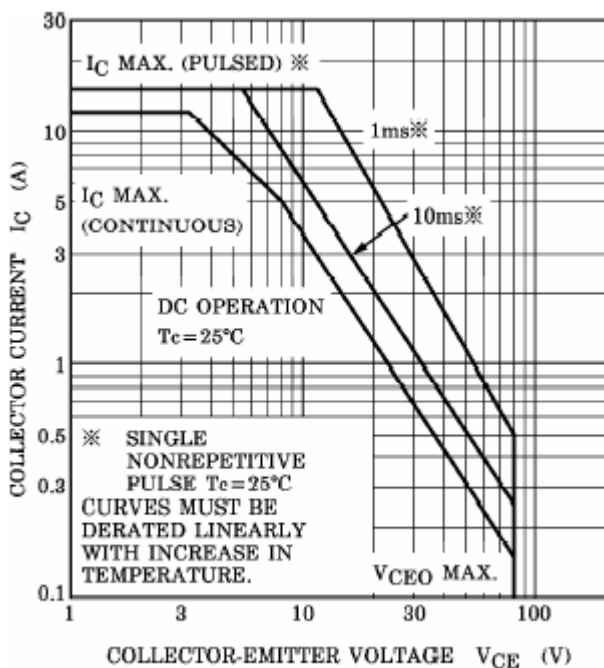


Fig.7 Safe Operating Area