

Silicon NPN Power Transistors

2SC3346

DESCRIPTION

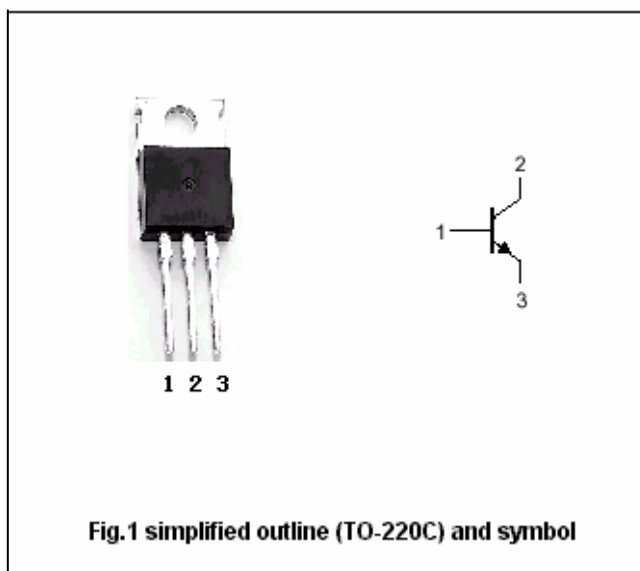
- With TO-220C package
- Complement to type 2SA1329
- High speed switching time
: $t_{stg}=1.0\mu s$ (Typ.)
- Low collector saturation voltage
: $V_{CE(sat)}=0.4V$ (Max.)@ $I_C=6A$

APPLICATIONS

- For high current switching applications

PINNING

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

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

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	$T_C=25^\circ C$	40	W
T_j	Junction temperature		150	$^\circ C$
T_{stg}	Storage temperature		-55~150	$^\circ C$

Silicon NPN Power Transistors

2SC3346

CHARACTERISTICS

Tj=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	$I_{B1}=-I_{B2}=0.3A$; $R_L=5\Omega, V_{CC}=30V$ $P_w=20\mu s$; Duty $\leq 1\%$		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

2SC3346

[illegible]

Silicon NPN Power Transistors

2SC3346

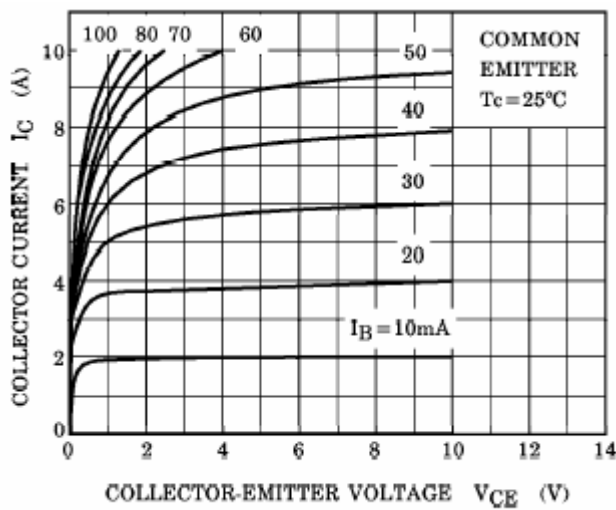


Fig.3 Static Characteristic

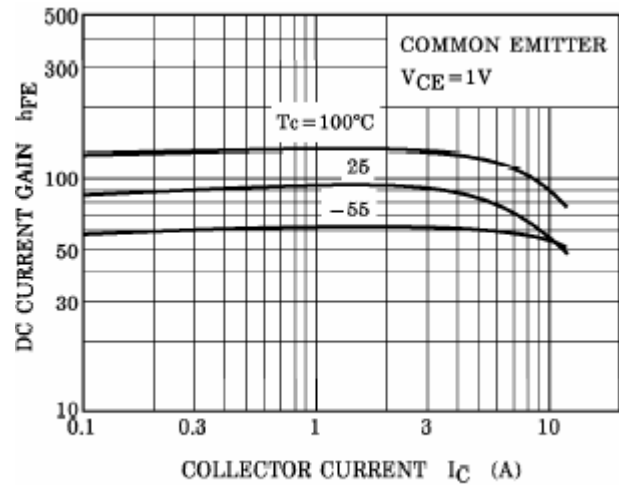


Fig.4 DC current Gain

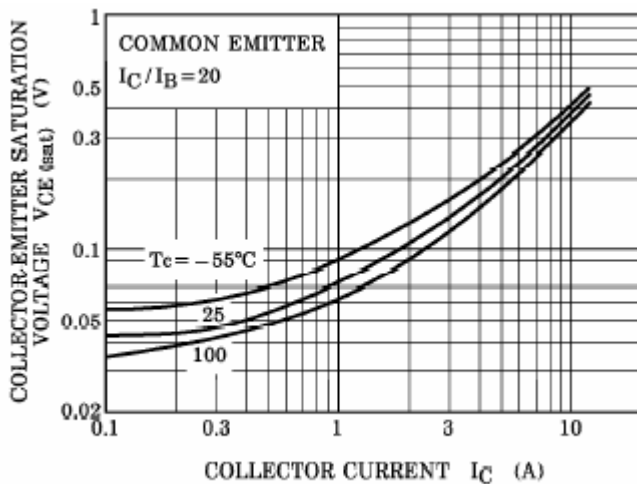


Fig.5 Collector-Emitter Saturation Voltage

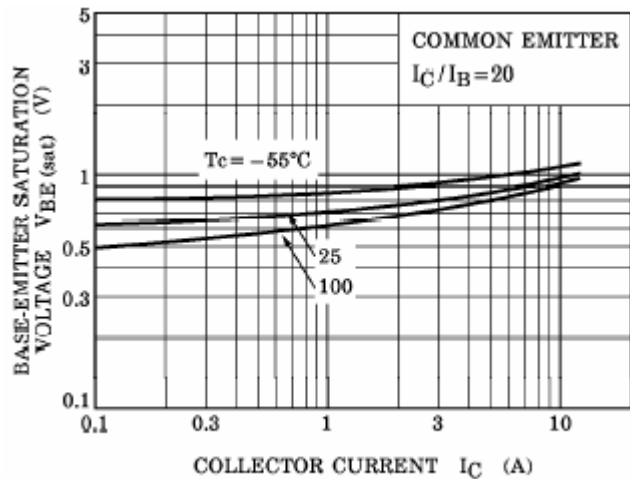


Fig.6 Base-Emitter Saturation Voltage

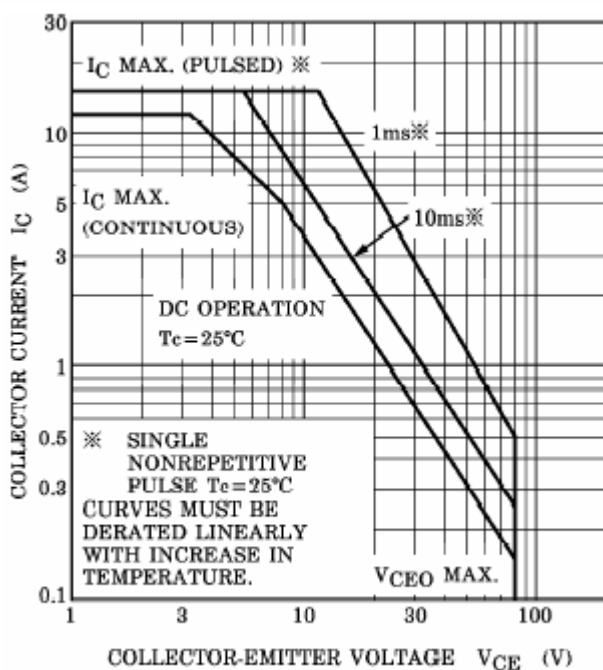


Fig.7 Safe Operating Area