

Silicon NPN Power Transistors

2SC3255

DESCRIPTION

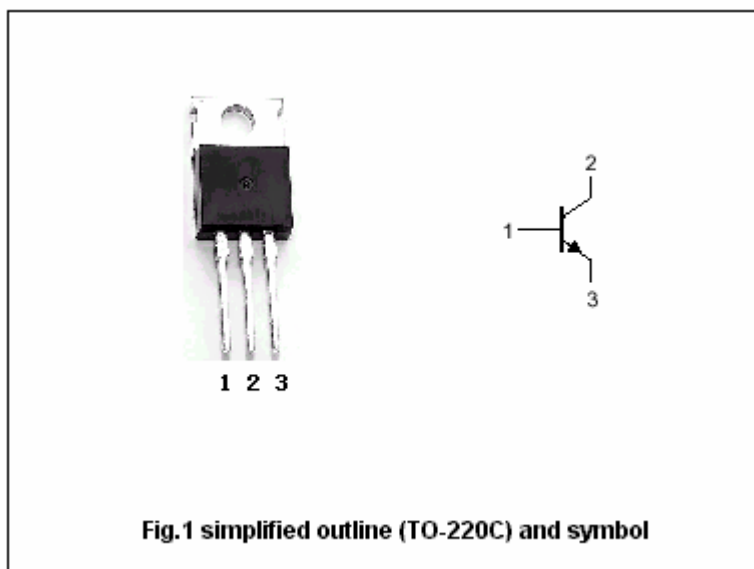
- With TO-220 package
- Complement to type 2SA1291
- Low collector saturation voltage
- High speed switching time

APPLICATIONS

- High current switching applications
- Power amplifications
- Inverters ,converters

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	80	V
V _{CEO}	Collector-emitter voltage	Open base	60	V
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		10	A
I _{CM}	Collector current-peak		12	A
P _C	Collector power dissipation	T _C =25□	40	W
T _j	Junction temperature		150	□
T _{stg}	Storage temperature		-55~150	□

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector -emitter breakdown voltage	$I_C=1mA, I_B=\infty$	60			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=1mA, I_E=0$	80			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1mA, I_C=0$	5			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=5A; I_B=0.25A$			0.4	V
I_{CBO}	Collector cut-off current	$V_{CB}=40V; I_E=0$			100	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=4V; I_C=0$			100	μA
h_{FE}	DC current gain	$I_C=1A; V_{CE}=2V$	70		280	
f_T	Transition frequency	$I_C=1A; V_{CE}=5V$		100		MHz

Switching times

t_{on}	Turn-on time	$I_C=5.0A, I_{B1}=-I_{B2}=0.25A$ $R_L=6.67\Omega; V_{CC}\approx 20V$		0.1		μs
t_s	Storage time			0.5		μs
t_f	Fall time			0.1		μs

◆ h_{FE} Classifications

Q	R	S
70-140	100-200	140-280

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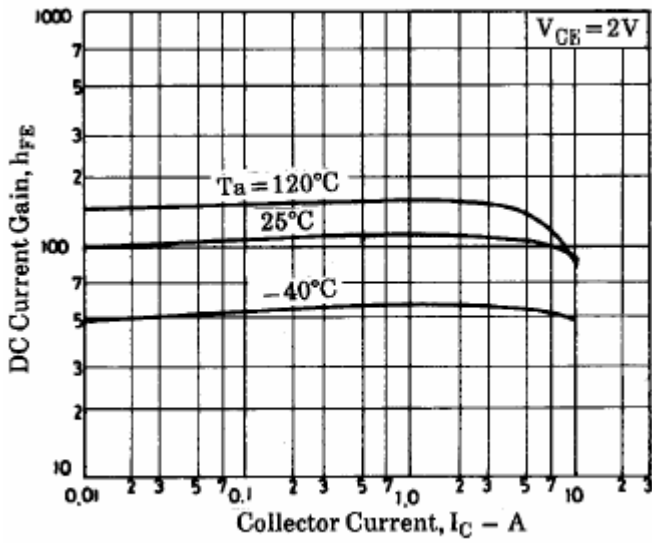


Fig.3 DC current Gain

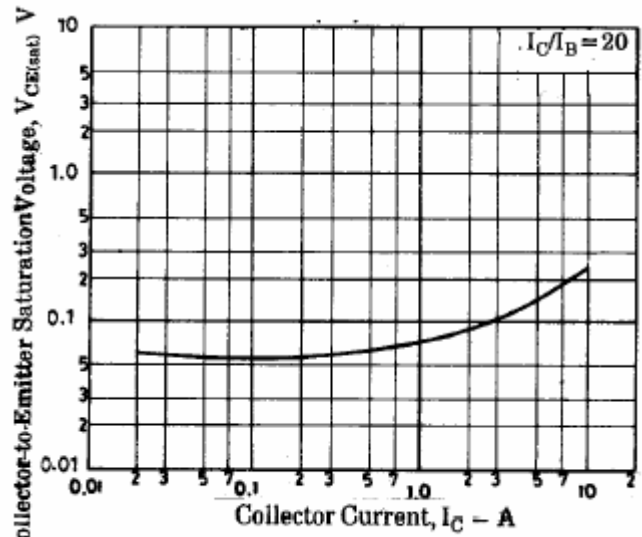


Fig.4 Collector-Emitter Saturation Voltage

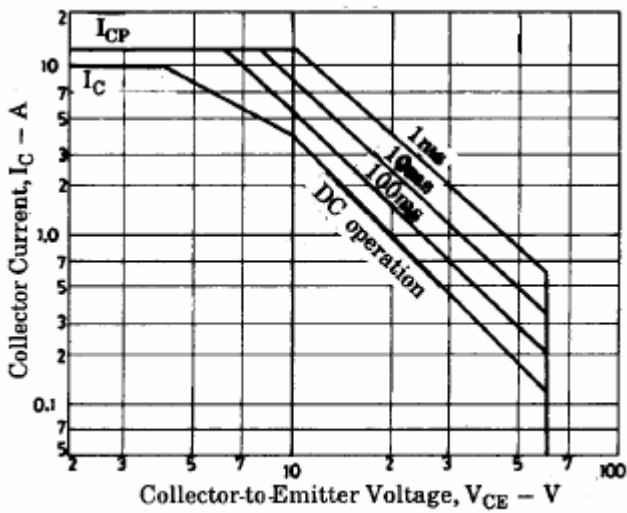


Fig.5 Safe Operating Area