

Silicon NPN Power Transistors

2SC5669

DESCRIPTION

- With TO-3PN package
- Complement to type 2SA2031
- Wide area of safe operation
- Large current capacitance

APPLICATIONS

- For audio frequency output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

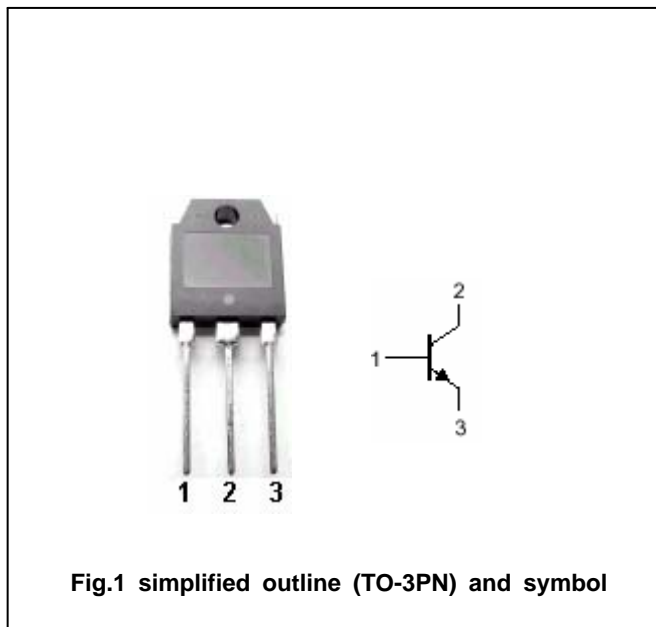


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	250	V
V _{CEO}	Collector-emitter voltage	Open base	230	V
V _{EBO}	Emitter-base voltage	Open collector	6	V
I _C	Collector current		15	A
I _{CM}	Collector current-peak		30	A
P _C	Collector power dissipation	T _a =25	2.5	W
		T _C =25	140	
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-55~150	

CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =50mA; R _{BE} =	230			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =5mA; I _E =0	250			V
V _(BREBO)	Emitter-base breakdown voltage	I _E =5mA; I _C =0	6			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =7.5 A; I _B =0.75A		0.2	2.0	V
V _{BE}	Base-emitter saturation voltage	I _C =7.5A ; V _{CE} =5V			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =250V; I _E =0			100	μ A
I _{EBO}	Emitter cut-off current	V _{EB} =4V; I _C =0			100	μ A
h _{FE-1}	DC current gain	I _C =1A ; V _{CE} =5V	60		160	
h _{FE-2}	DC current gain	I _C =7.5A ; V _{CE} =5V	35			
C _{OB}	Output capacitance	I _E =0 ; V _{CB} =10V, f=1MHz		200		pF
f _T	Transition frequency	I _C =1A ; V _{CE} =5V		15		MHz

Switching times

t _{on}	Turn-on time	I _C =7.5A; R _L =6.67 I _{B1} =-I _{B2} =0.75A V _{CC} =50V		0.56		μ s
t _{stg}	Storage time			3.3		μ s
t _f	Fall time			0.4		μ s

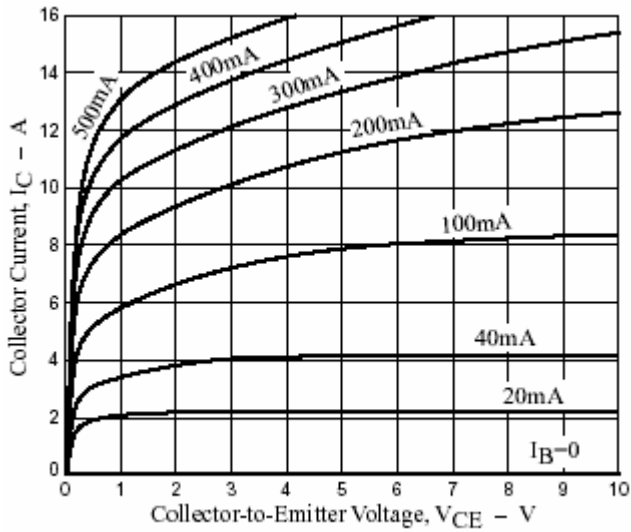


Fig.3 Static Characteristic

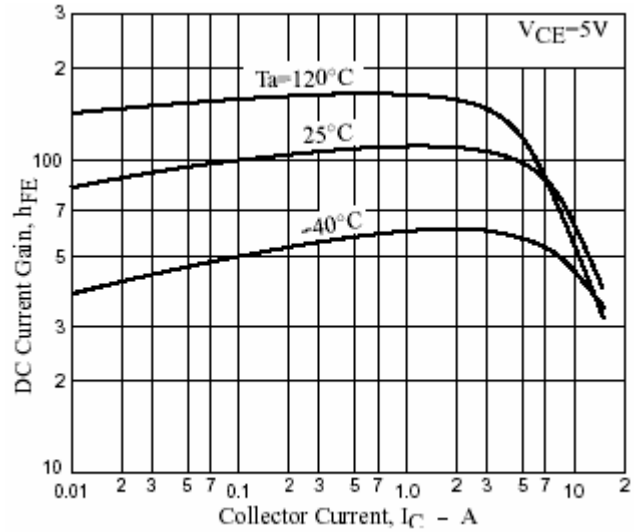


Fig.4 DC current Gain

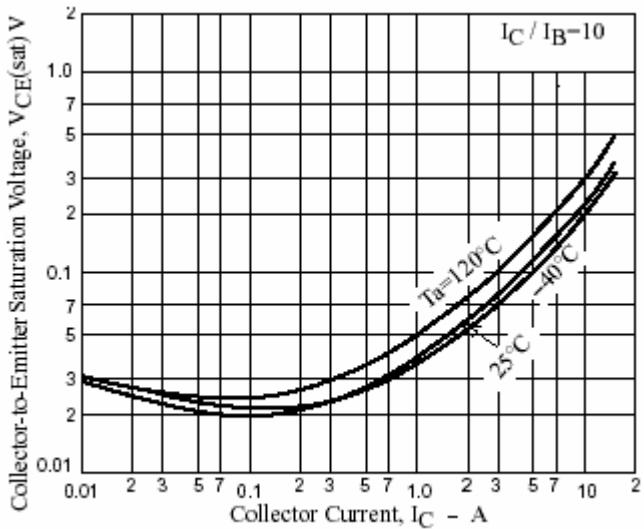


Fig.5 Collector-Emitter Saturation Voltage

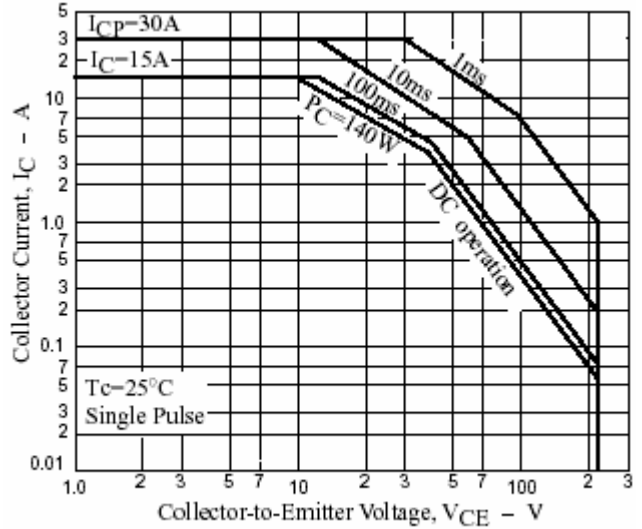


Fig.6 Safe Operating Area