

Silicon NPN Power Transistors

2SC2908

DESCRIPTION

- With TO-3PN package
- Low collector saturation voltage

APPLICATIONS

- For use in power amplifier and switching circuits applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

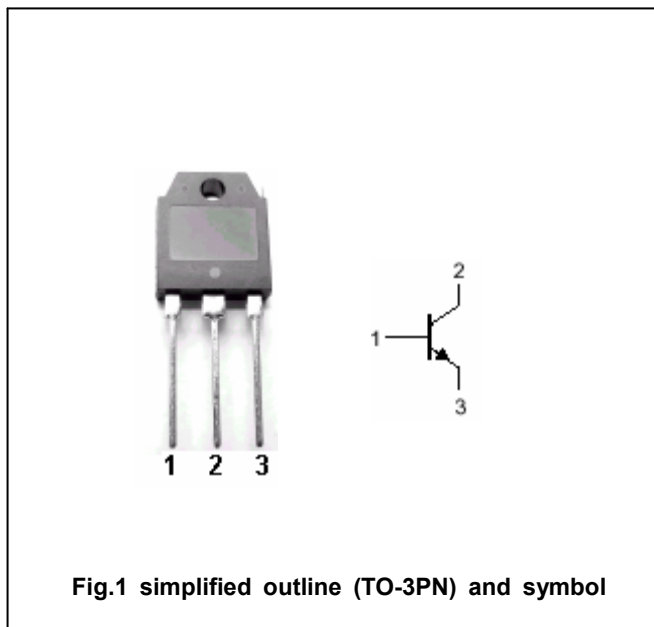


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CB0}	Collector-base voltage	Open emitter	200	V
V _{CEO}	Collector-emitter voltage	Open base	100	V
V _{EBO}	Emitter-base voltage	Open collector	12	V
I _C	Collector current		5.0	A
I _{CM}	Collector current-peak		10	A
I _B	Base current		2.5	A
P _C	Collector power dissipation	T _C =25°C	50	W
		Derate above 25°C	0.4	W/°C
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction case	2.5	°C/W

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =3.0A ; I _{B1} =0.3A; L=1.0mH	100			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =3A ; I _B =300mA			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =3A ; I _B =300mA			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =100V; I _E =0			10	μA
I _{CEX}	Collector cut-off current	V _{CE} =100V; V _{BE} =-1.5V			10	μA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			10	μA
h _{FE-1}	DC current gain	I _C =0.3A ; V _{CE} =5V	60		320	
h _{FE-2}	DC current gain	I _C =3A ; V _{CE} =5V	40			

Switching times

t _{on}	Turn-on time	I _C =3A; V _{CC} =30V I _{B1} =0.3A , I _{B2} =-0.3A RL=10Ω			0.5	μs
t _s	Storage time				2.0	μs
t _f	Fall time				1.0	μs

◆ h_{FE-1} Classifications

M	L	K
60-120	100-200	160-320

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PACKAGE OUTLINE

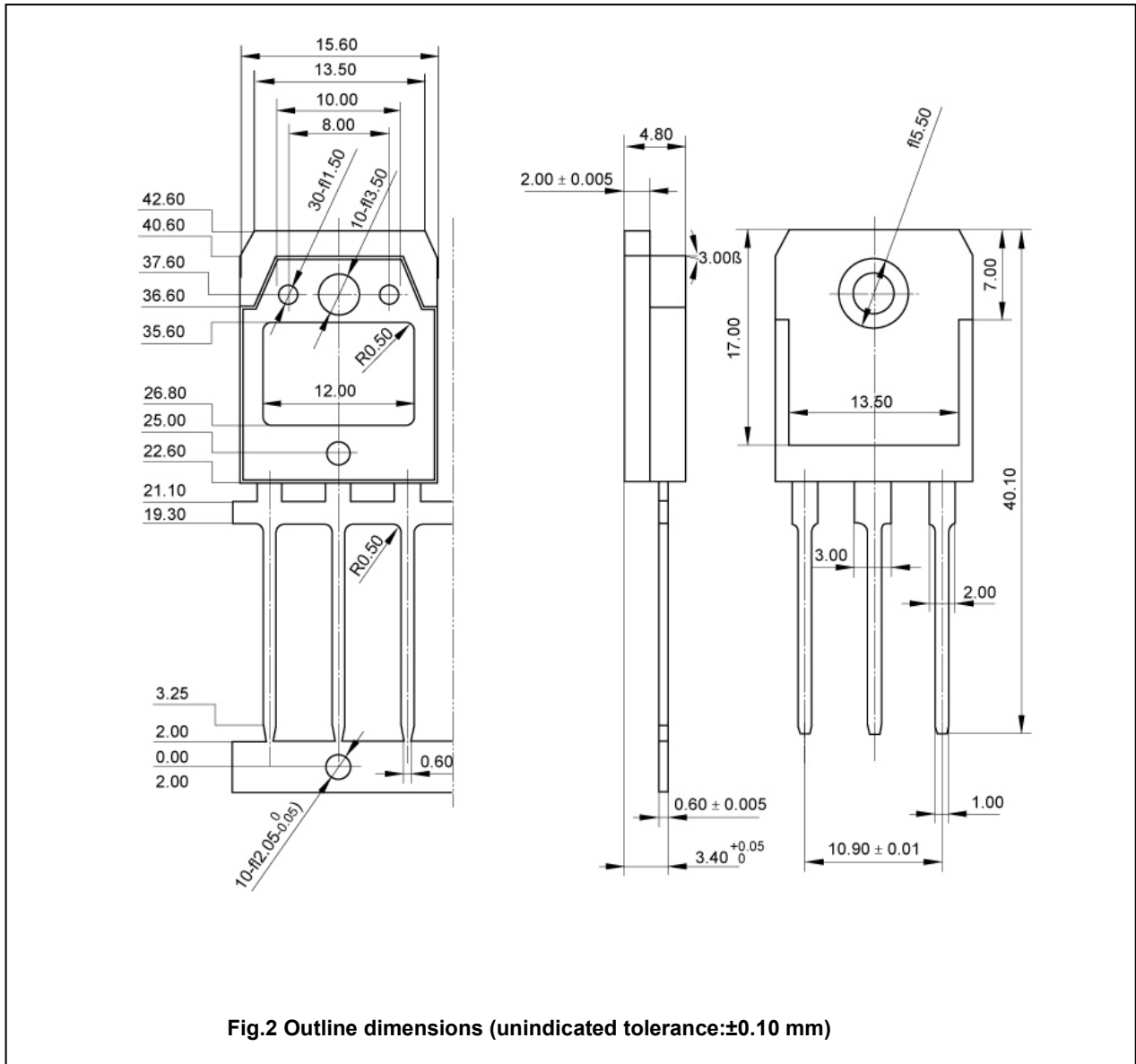


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

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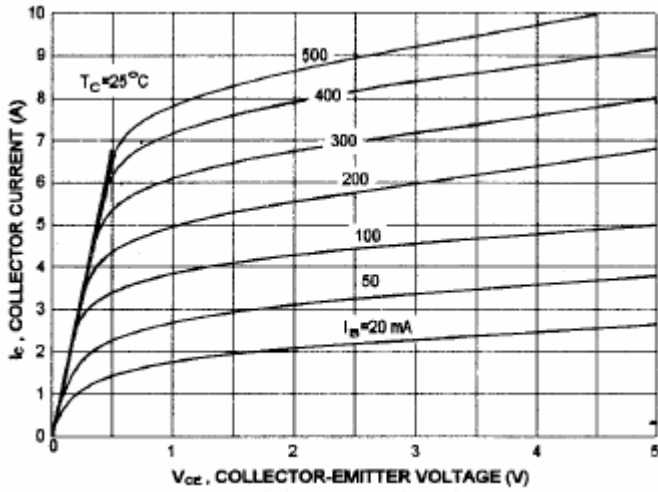


Fig.3 Static Characteristic

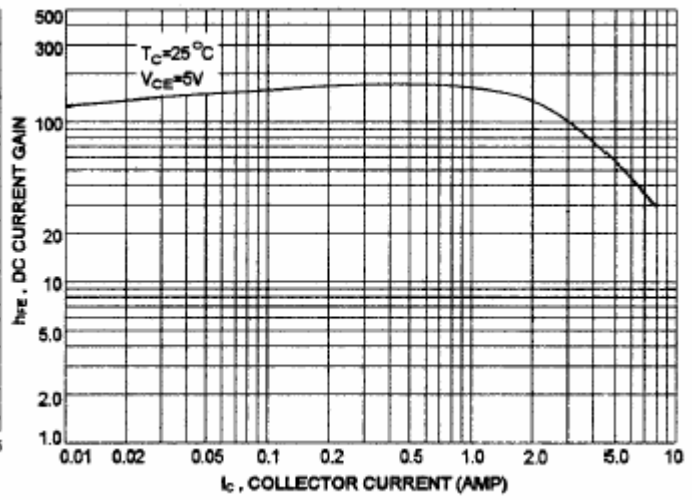


Fig.4 DC current Gain

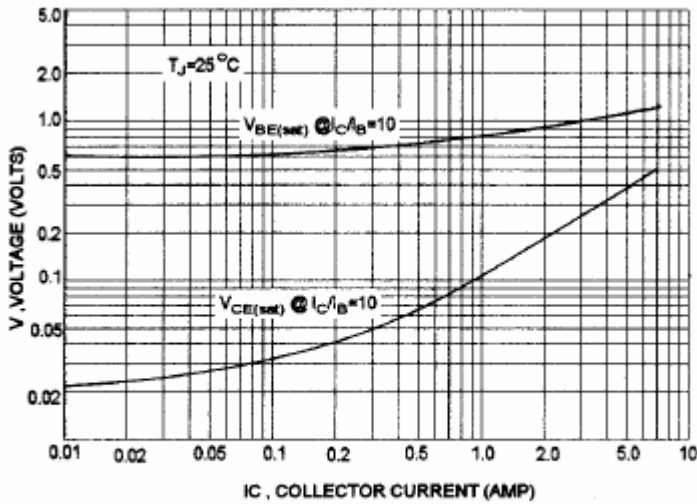


Fig.5 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

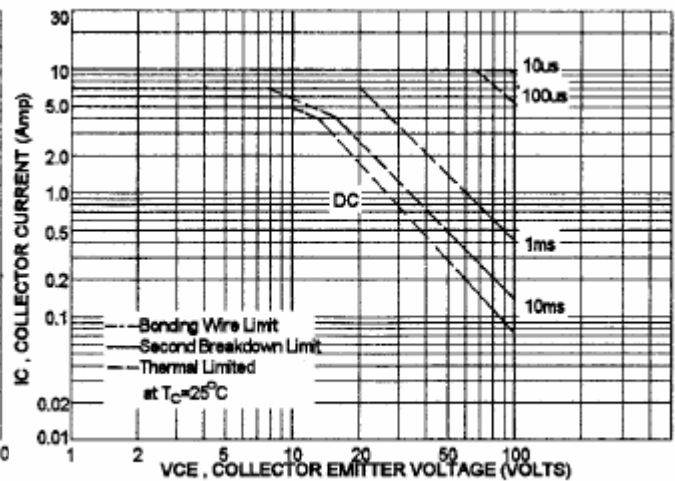


Fig.6 Safe Operating Area