

Silicon NPN Power Transistors

2SC3835

DESCRIPTION

- With TO-3PN package
- Switching transistor

APPLICATIONS

- For humidifier ,DC-DC converter and general purpose applications

PINNING

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

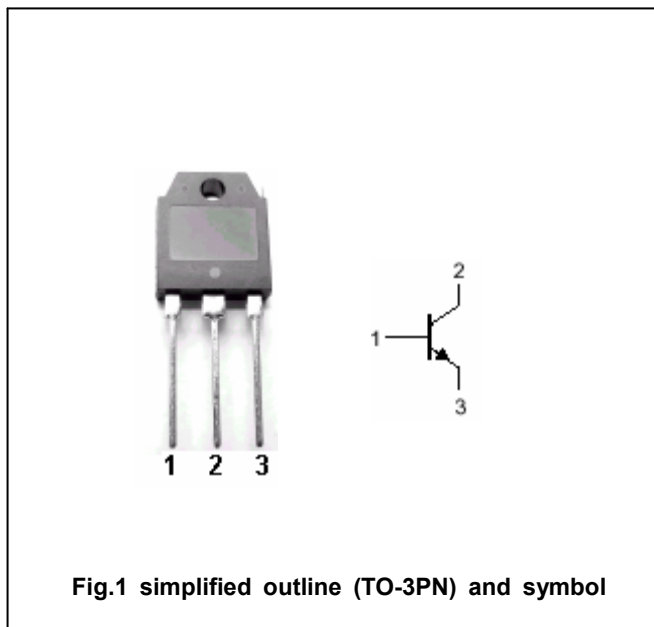


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	200	V
V _{CEO}	Collector-emitter voltage	Open base	120	V
V _{EBO}	Emitter-base voltage	Open collector	8	V
I _C	Collector current (DC)		7	A
I _{CM}	Collector current-peak		14	A
I _B	Base current (DC)		3	A
P _C	Collector power dissipation	T _C =25°C	70	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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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	120			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =3A ; I _B =0.3A			0.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =3A; I _B =0.3A			1.2	V
I _{CBO}	Collector cut-off current	V _{CB} =200V; I _E =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =8V; I _C =0			0.1	mA
h _{FE}	DC current gain	I _C =3A ; V _{CE} =4V	70		220	
f _T	Transition frequency	I _C =0.5A ; V _{CE} =12V		30		MHz
C _{OB}	Collector output capacitance	f=1MHz; V _{CB} =10V		110		pF

Switching times

t _{on}	Turn-on time	I _C =3.0A I _{B1} =0.3A, I _{B2} =-0.6A V _{CC} =50V, R _L =16.7Ω			0.5	μs
t _s	Storage time				3.0	μs
t _f	Fall time				0.5	μs

◆ h_{FE} Classifications

O	Y	G
70-120	100-200	160-220

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PACKAGE OUTLINE

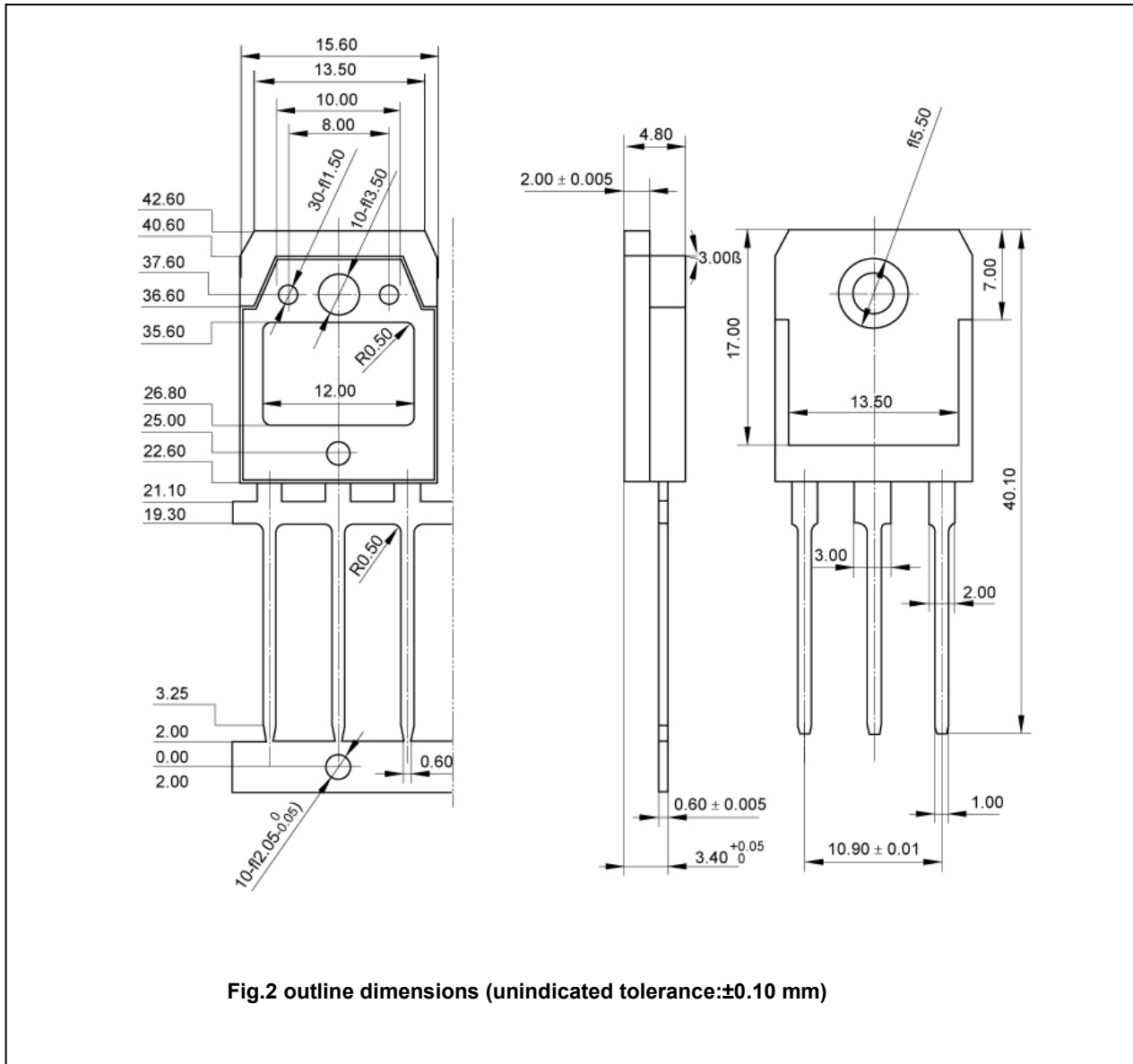


Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)

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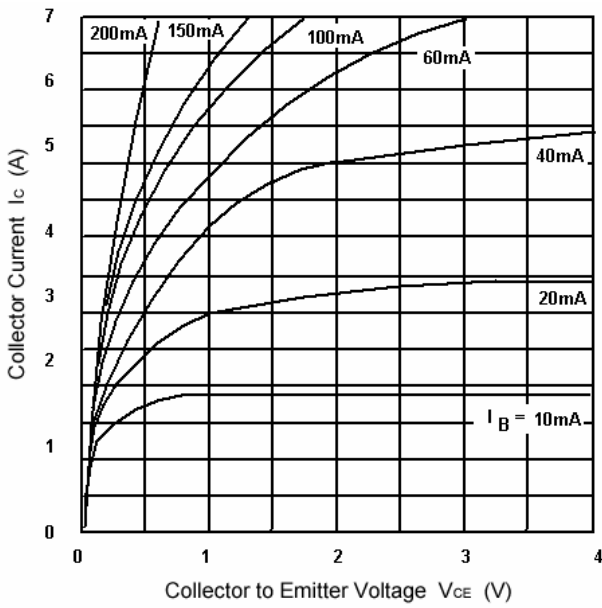


Fig.3 Static Characteristic

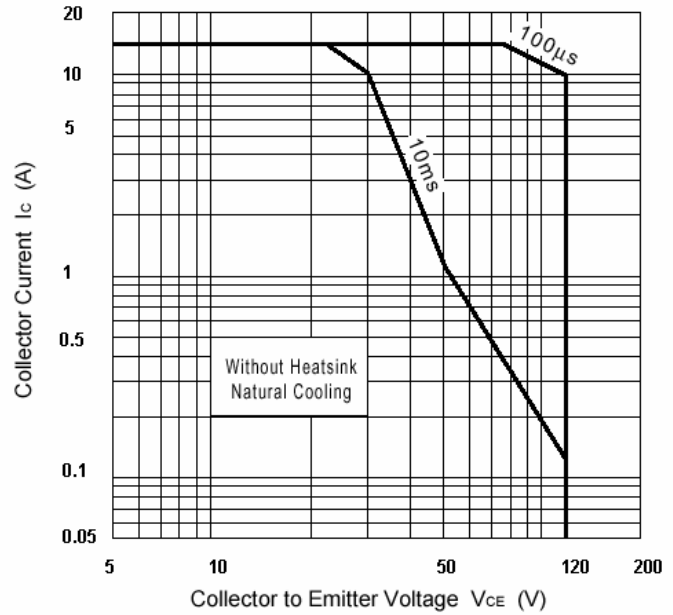


Fig.4 Safe Operating Area

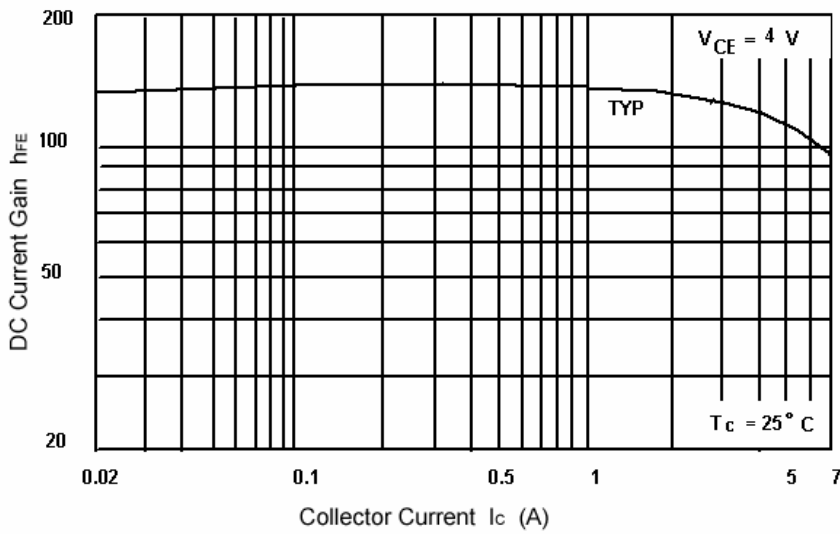


Fig.5 DC current Gain