

Silicon NPN Power Transistors

2SC3856

DESCRIPTION

- With TO-3PN package
- Complement to type 2SA1492

APPLICATIONS

- Audio and general purpose

PINNING

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

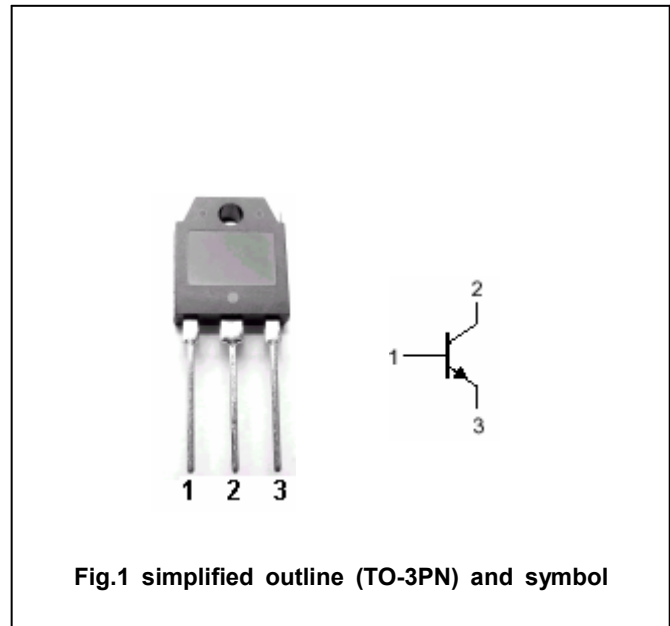


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	200	V
V_{CEO}	Collector-emitter voltage	Open base	180	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		15	A
I_B	Base current		4	A
P_C	Collector power dissipation	$T_C=25^\circ$	130	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

Silicon NPN Power Transistors

2SC3856

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	180			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =5A ; I _B =0.5A			2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =200V ; I _E =0			100	μA
I _{EBO}	Emitter cut-off current	V _{EB} =6V ; I _C =0			100	μA
h _{FE}	DC current gain	I _C =3A ; V _{CE} =4V	50		180	
C _{OB}	Output capacitance	I _E =0 ; V _{CB} =10V, f=1MHz		300		pF
f _T	Transition frequency	I _C =0.5A ; V _{CE} =12V		20		MHz

Switching times

t _{on}	Turn-on time	I _C =10A; R _L =4Ω I _{B1} =- I _{B2} =1A V _{CC} =40V		0.50		μs
t _s	Storage time			1.80		μs
t _f	Fall time			0.60		μs

◆ h_{FE} Classifications

O	P	Y
50-100	70-140	90-180

Silicon NPN Power Transistors

2SC3856

PACKAGE OUTLINE

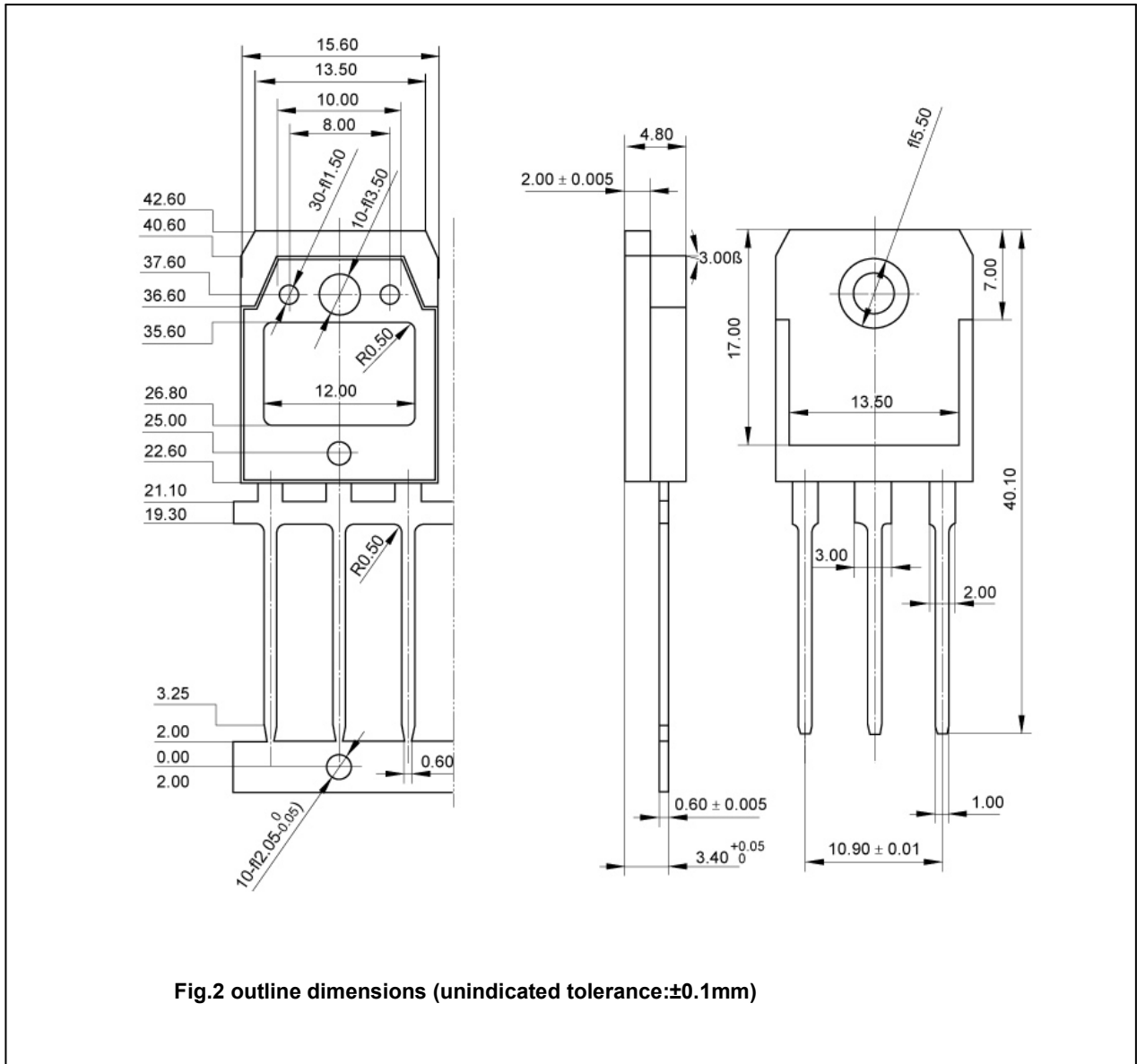


Fig.2 outline dimensions (unindicated tolerance: ± 0.1 mm)

Silicon NPN Power Transistors

2SC3856

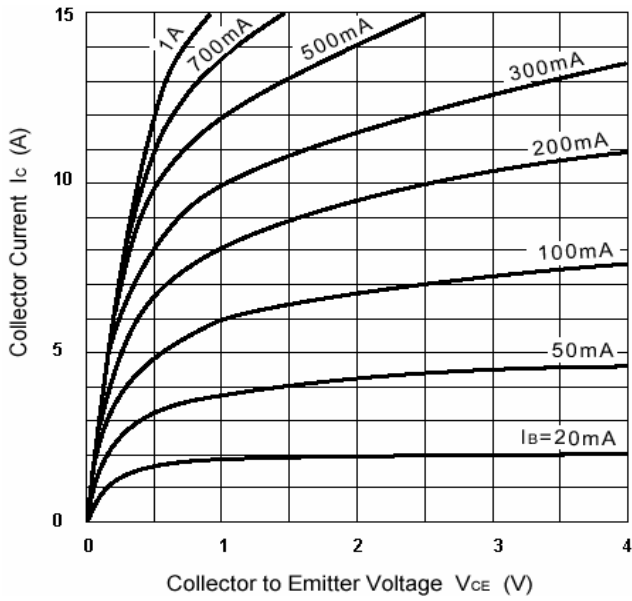


Fig.3 Static Characteristic

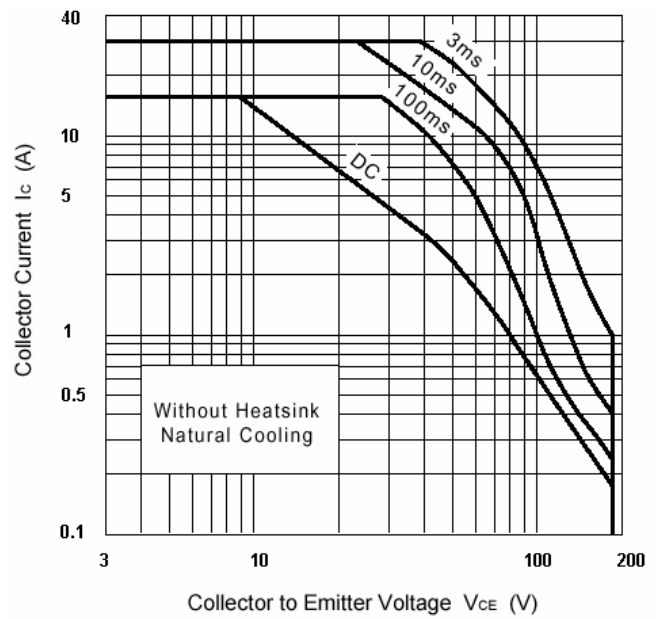


Fig.4 Safe Operating Area

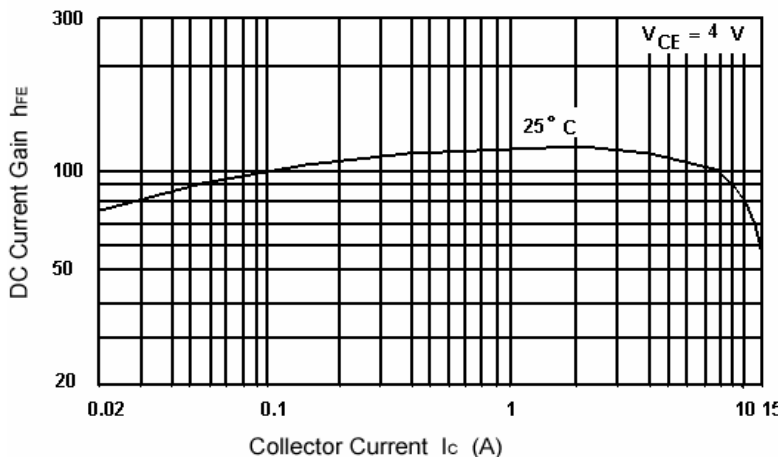


Fig.5 DC current Gain