

Silicon NPN Power Transistors

2SC3856

DESCRIPTION

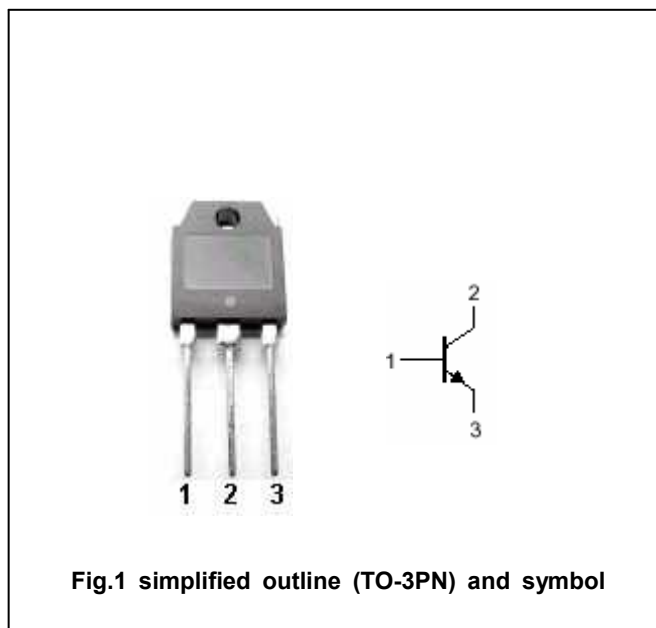
- With TO-3PN package
- Complement to type 2SA1492

APPLICATIONS

- Audio and general purpose

PINNING

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

**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	□

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CHARACTERISTICS

Tj=25℃ 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	$I_C=10A; R_L=4\Omega$ $I_{B1}=-I_{B2}=1A$ $V_{CC}=40V$		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

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Technical drawing of a mechanical part, showing front and side views with dimensions.

Front View Dimensions:

- Overall width: 15.60
- Inner width: 13.50
- Top width: 10.00
- Top width: 8.00
- Top width: 30-R11.50
- Top width: 10-R13.50
- Top width: R0.50
- Top width: 12.00
- Top width: 42.60
- Top width: 40.60
- Top width: 37.60
- Top width: 36.60
- Top width: 35.60
- Top width: 26.80
- Top width: 25.00
- Top width: 22.60
- Top width: 21.10
- Top width: 19.30
- Top width: 3.25
- Top width: 2.00
- Top width: 0.00
- Top width: 2.00
- Top width: 0.60
- Top width: 10-R12.05-0.08
- Top width: R0.90

Side View Dimensions:

- Overall height: 40.10
- Overall width: 13.50
- Overall width: 17.00
- Overall width: 7.00
- Overall width: 3.00
- Overall width: 2.00
- Overall width: 1.00
- Overall width: 10.90 ± 0.01
- Overall width: 3.40^{+0.05}₀
- Overall width: 0.60 ± 0.005
- Overall width: 4.80
- Overall width: 2.00 ± 0.005
- Overall width: 3.00 ± 0.005
- Overall width: R5.50

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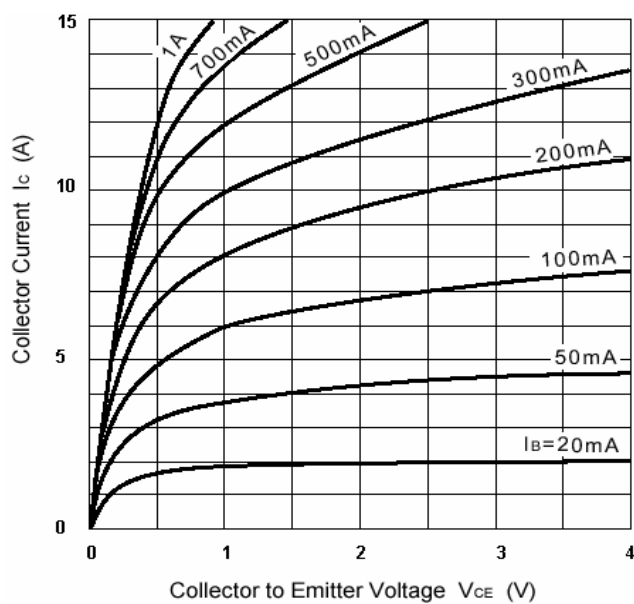


Fig.3 Static Characteristic

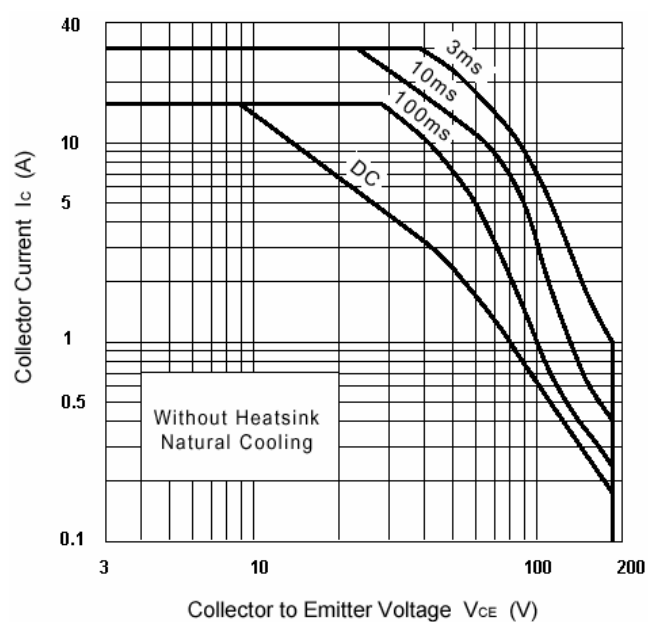


Fig.4 Safe Operating Area

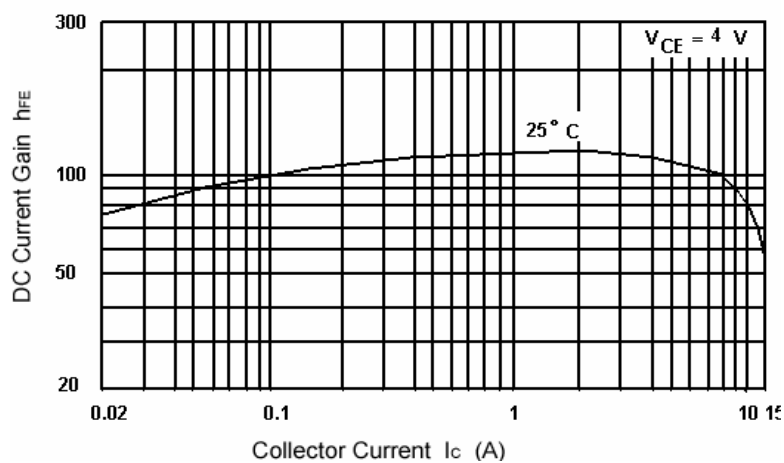


Fig.5 DC current Gain