

Silicon NPN Power Transistors

2SC3856

DESCRIPTION

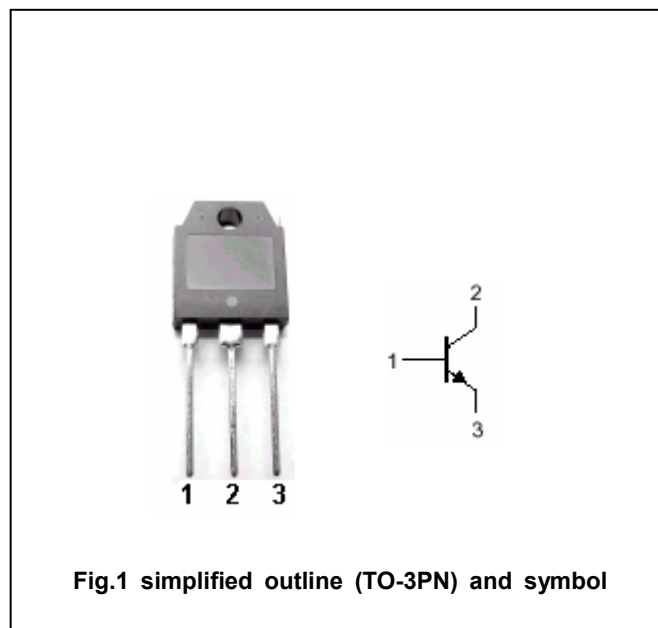
- With TO-3PN package
- Complement to type 2SA1492

APPLICATIONS

- Audio and general purpose

PINNING

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

Absolute maximum ratings($T_a = \square$)

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	$T_C = 25\square$	130	W
T_j	Junction temperature		150	$\square$
T_{stg}	Storage temperature		-55~150	$\square$

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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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[illegible]

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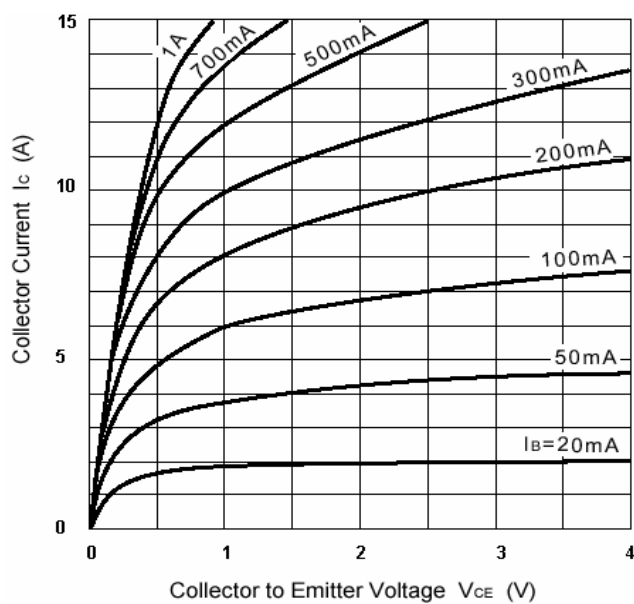


Fig.3 Static Characteristic

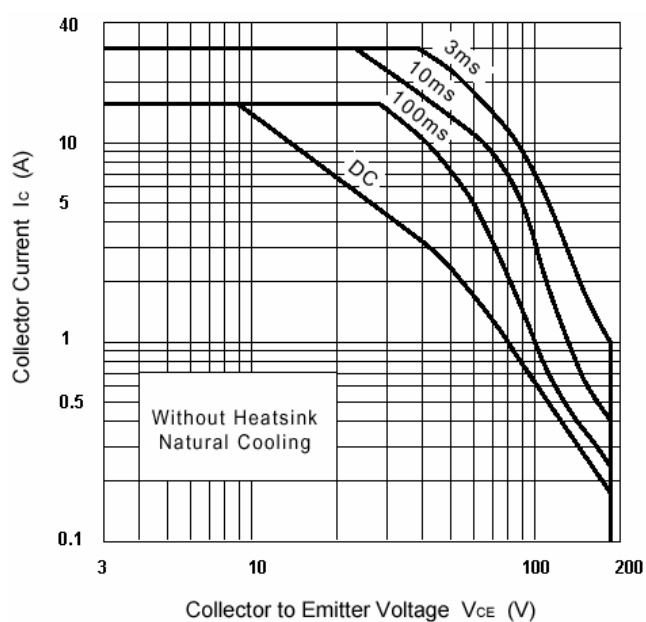


Fig.4 Safe Operating Area

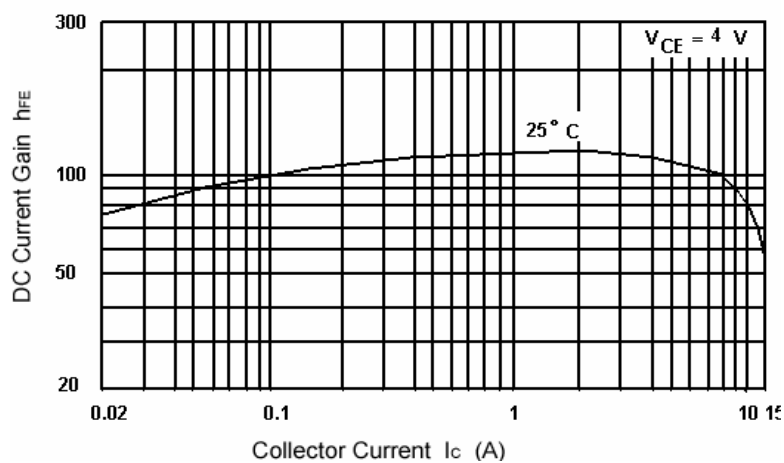


Fig.5 DC current Gain