

## Silicon PNP Power Transistors

## 2SA1386 2SA1386A

## DESCRIPTION

- With TO-3PN package
- Complement to type 2SC3519/3519A

## APPLICATIONS

- Audio and general purpose

## PINNING

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

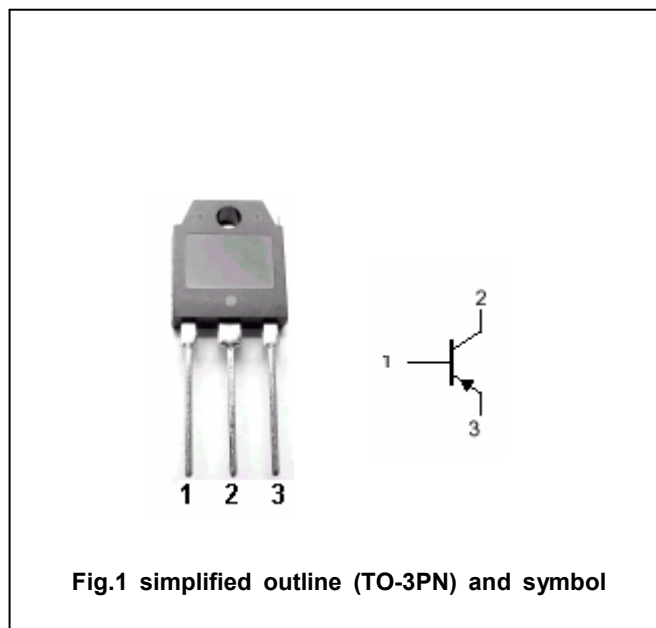


Fig.1 simplified outline (TO-3PN) and symbol

## Absolute maximum ratings(Ta=□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2SA1386	Open emitter	-160	V
		2SA1386A		-180	
$V_{CEO}$	Collector-emitter voltage	2SA1386	Open base	-160	V
		2SA1386A		-180	
$V_{EBO}$	Emitter-base voltage		Open collector	-5	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

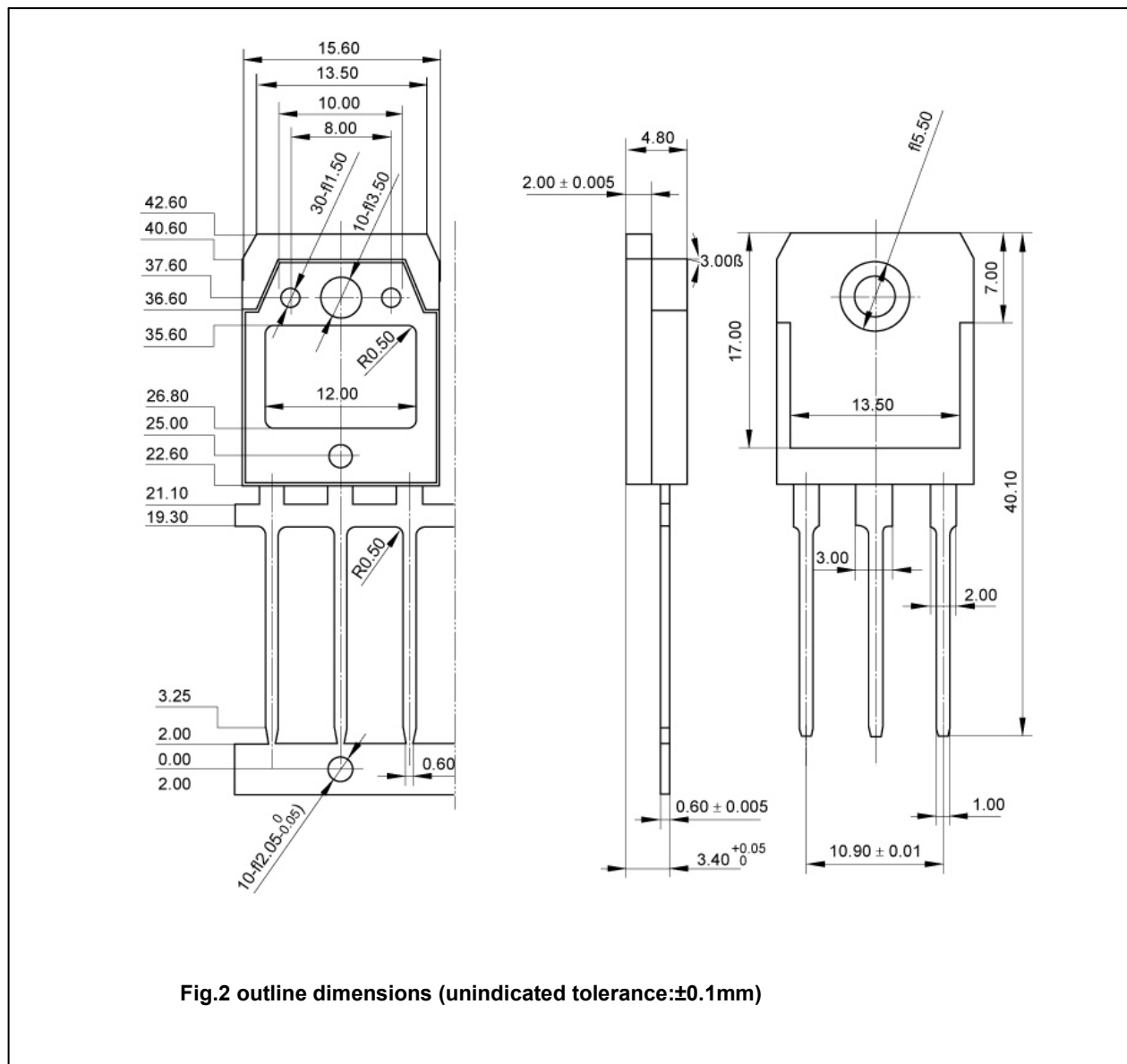
Tj=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SA1386	$I_C=-25mA ; I_B=0$	-160			V
		2SA1386A		-180			
$V_{CEsat}$	Collector-emitter saturation voltage		$I_C=-5A; I_B=-0.5A$			-2.0	V
$I_{CBO}$	Collector cut-off Current	2SA1386	$V_{CB}=-160V; I_E=0$			-100	$\mu A$
		2SA1386A	$V_{CB}=-180V; I_E=0$				
$I_{EBO}$	Emitter cut-off current		$V_{EB}=-5V; I_C=0$			-100	$\mu A$
$h_{FE}$	DC current gain		$I_C=-5A ; V_{CE}=-4V$	50		180	
$C_{ob}$	Output capacitance		$I_E=0 ; V_{CB}=10V;f=1MHz$		500		pF
$f_T$	Transition frequency		$I_C=-2A ; V_{CE}=-12V$		40		MHz
Switching times							
$t_{on}$	Turn-on time		$I_C=-5A;R_L=4\Omega$ $I_{B1}=-I_{B2}=-1A$ $V_{CC}=40V$		0.30		$\mu s$
$t_s$	Storage time				0.70		$\mu s$
$t_f$	Fall time				0.20		$\mu s$

◆  $h_{FE}$  Classifications

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

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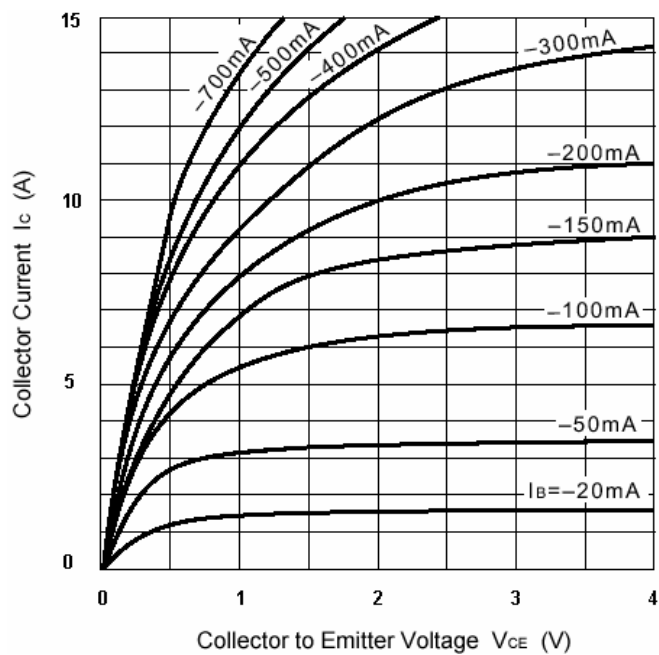


Fig.3 Static Characteristic

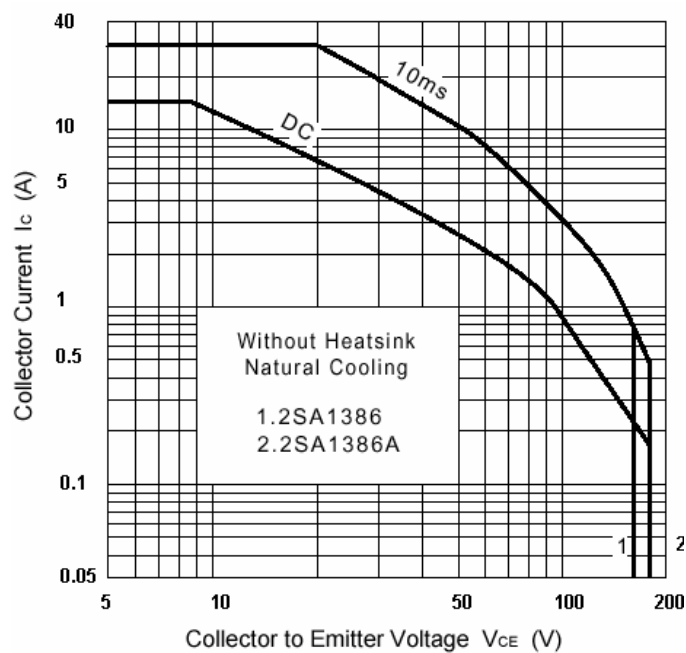


Fig.4 Safe Operating Area

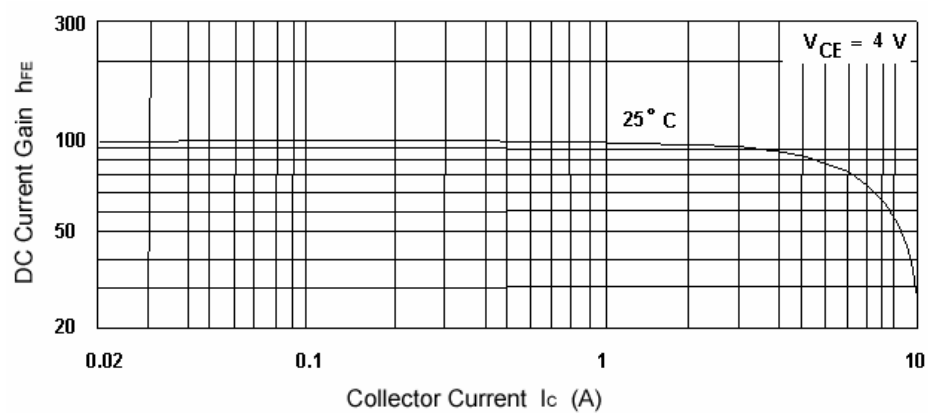


Fig.5 DC current Gain