

**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

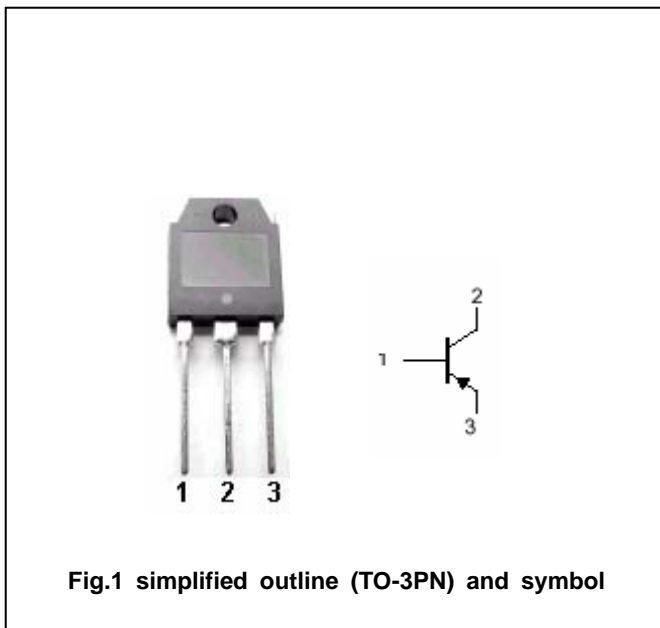


Fig.1 simplified outline (TO-3PN) and symbol

**Absolute maximum ratings(Ta= )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2SA1386	-160	V
		2SA1386A	-180	
V <sub>CEO</sub>	Collector-emitter voltage	2SA1386	-160	V
		2SA1386A	-180	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-15	A
I <sub>B</sub>	Base current		-4	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25	130	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-55~150	

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	2SA1386	I <sub>C</sub> =-25mA ; I <sub>B</sub> =0	-160			V
		2SA1386A		-180			
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-5A; I <sub>B</sub> =-0.5A			-2.0	V	
I <sub>CBO</sub>	Collector cut-off Current	2SA1386	V <sub>CB</sub> =-160V; I <sub>E</sub> =0			-100	μ A
		2SA1386A		V <sub>CB</sub> =-180V; I <sub>E</sub> =0			
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-100	μ A	
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-5A ; V <sub>CE</sub> =-4V	50		180		
C <sub>ob</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V;f=1MHz		500		pF	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-2A ; V <sub>CE</sub> =-12V		40		MHz	
Switching times							
t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-5A;R <sub>L</sub> =4 I <sub>B1</sub> =-I <sub>B2</sub> =-1A V <sub>CC</sub> =40V		0.30		μ s	
t <sub>s</sub>	Storage time			0.70		μ s	
t <sub>f</sub>	Fall time			0.20		μ s	

◆ h<sub>FE</sub> Classifications

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



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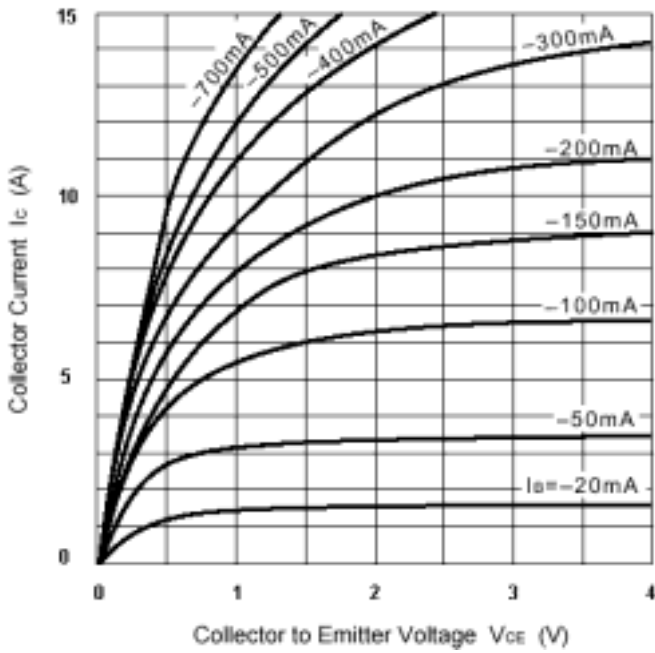


Fig.3 Static Characteristic

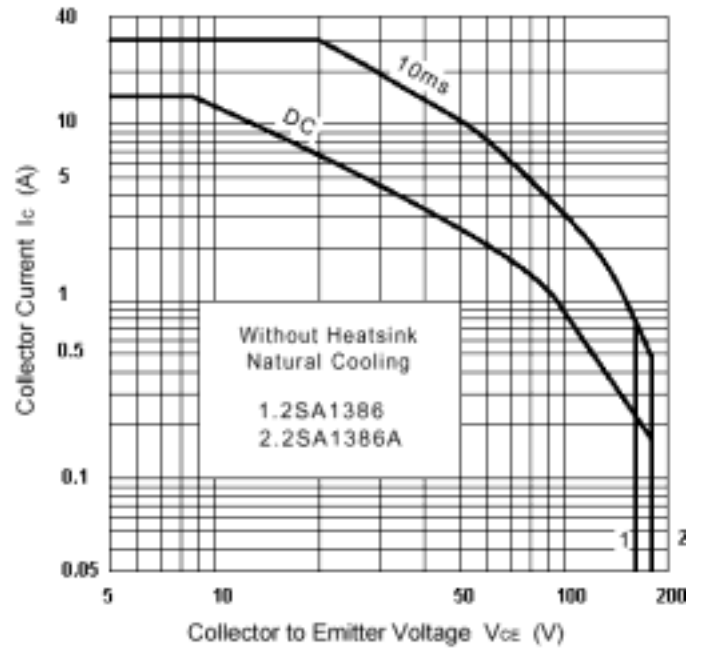


Fig.4 Safe Operating Area

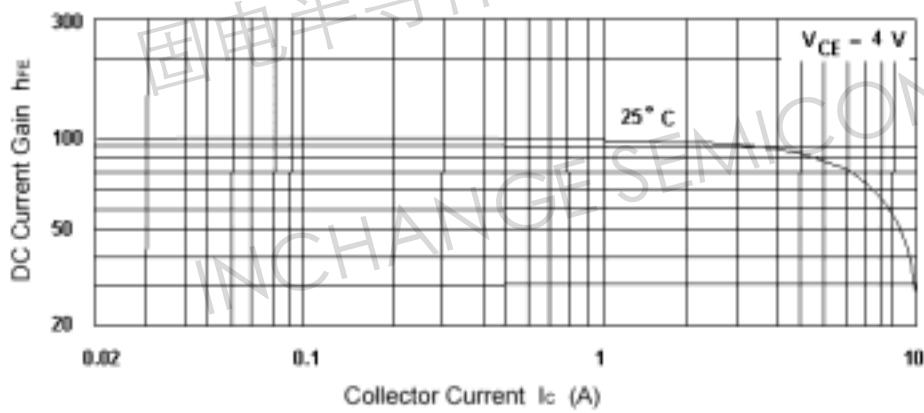


Fig.5 DC current Gain