

## Silicon PNP Power Transistors

## 2SA699 2SA699A

## DESCRIPTION

- With TO-202 package
- Complement to type 2SC1226/1226A

## APPLICATIONS

- Power amplifier applications

## PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

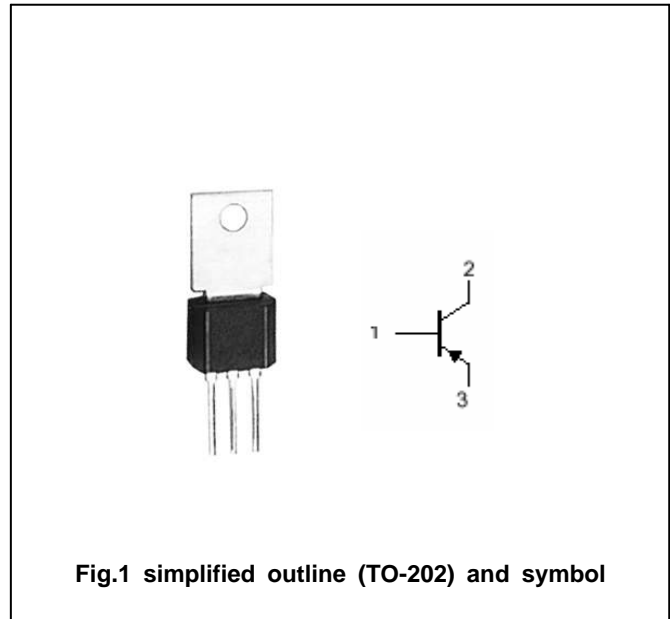


Fig.1 simplified outline (TO-202) and symbol

## Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2SA699	-40	V
		2SA699A	-50	
$V_{CEO}$	Collector-emitter voltage	2SA699	-32	V
		2SA699A	-40	
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current		-2	A
$I_{CM}$	Collector current-peak		-3	A
$I_B$	Base current		-0.6	A
$P_C$	Collector power dissipation	$T_C=25^\circ\text{C}$	10	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEsat</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-1.5A ; I <sub>B</sub> =-0.15A		-0.4	-1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage		I <sub>C</sub> =-2A ; I <sub>B</sub> =-0.2 A			-1.5	V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	2SA699	I <sub>C</sub> =-1mA; I <sub>E</sub> =0	-40			V
		2SA699A		-50			
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	2SA699	I <sub>C</sub> =-10mA; I <sub>B</sub> =0	-32			V
		2SA699A		-40			
I <sub>CBO</sub>	Collector cut-off current		V <sub>CB</sub> =-20V; I <sub>E</sub> =0			-1	μ A
I <sub>CEO</sub>	Collector cut-off current		V <sub>CE</sub> =-12V; I <sub>B</sub> =0			-100	μ A
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> =-1A ; V <sub>CE</sub> =-5V	50		220	
C <sub>OB</sub>	Output capacitance		I <sub>E</sub> =0; V <sub>CB</sub> =-5V; f=1MHz		70		pF
f <sub>T</sub>	Transition frequency		I <sub>E</sub> =0.5A ; V <sub>CB</sub> =-5V		150		MHz

◆ h<sub>FE</sub> classifications

P	Q	R
50-100	80-160	100-220

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PACKAGE OUTLINE

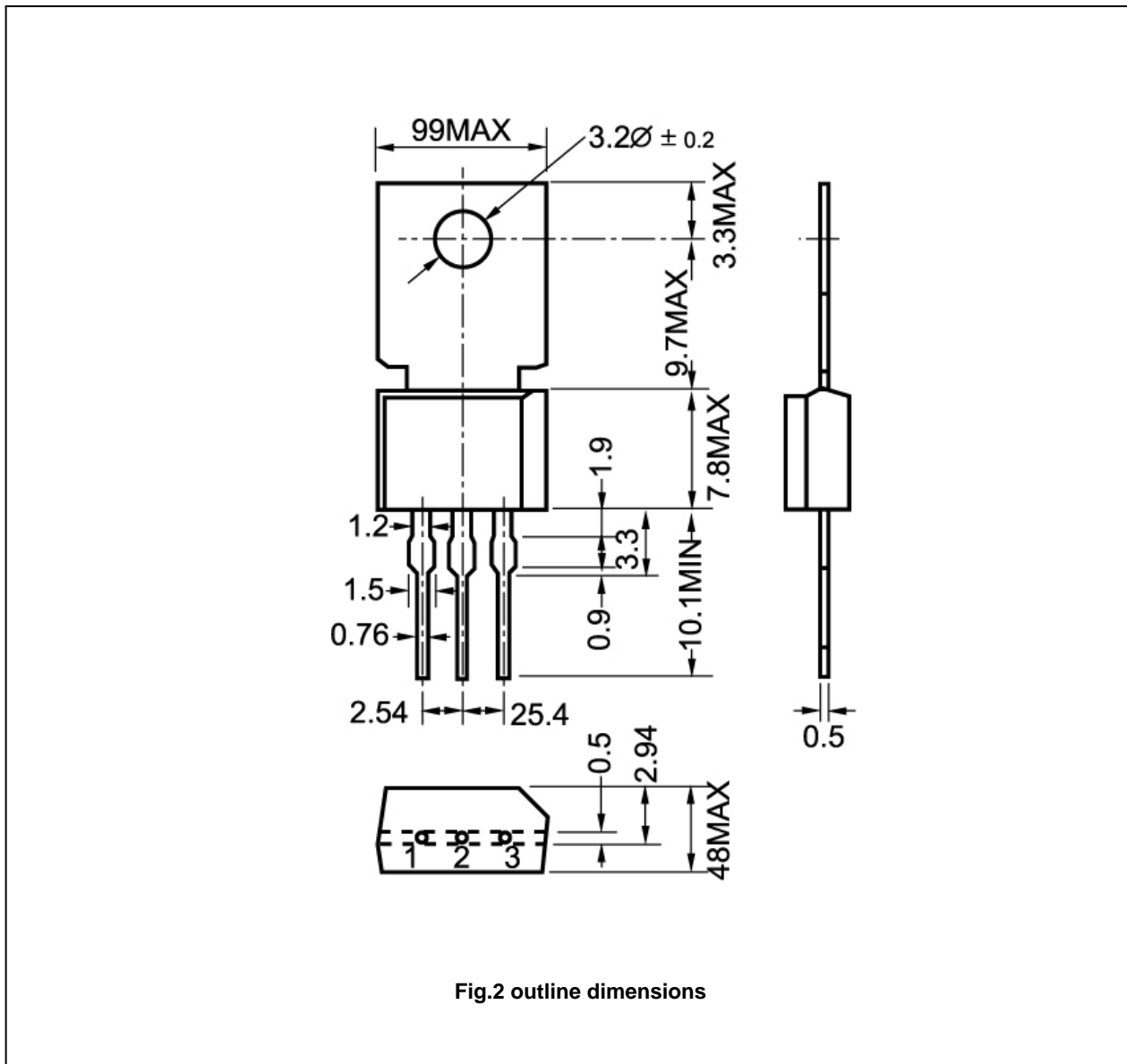
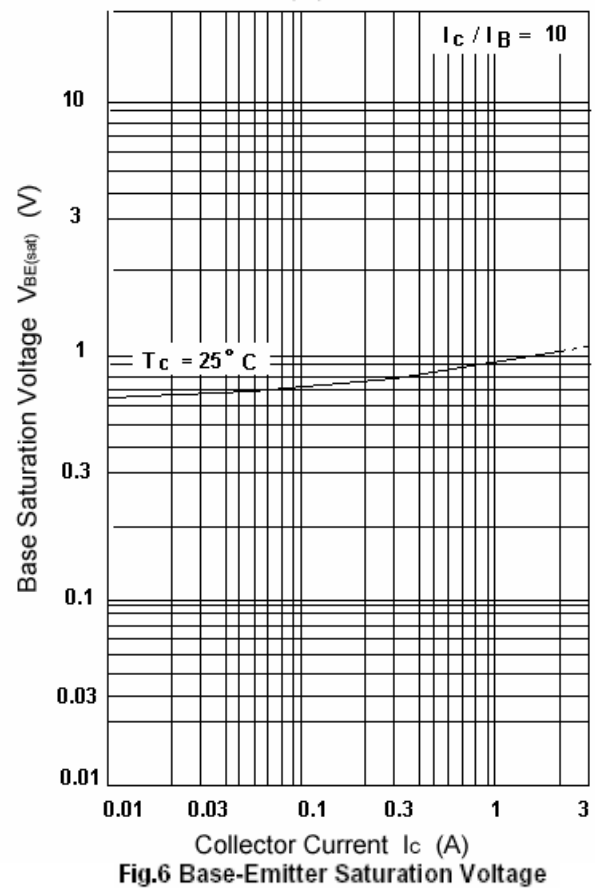
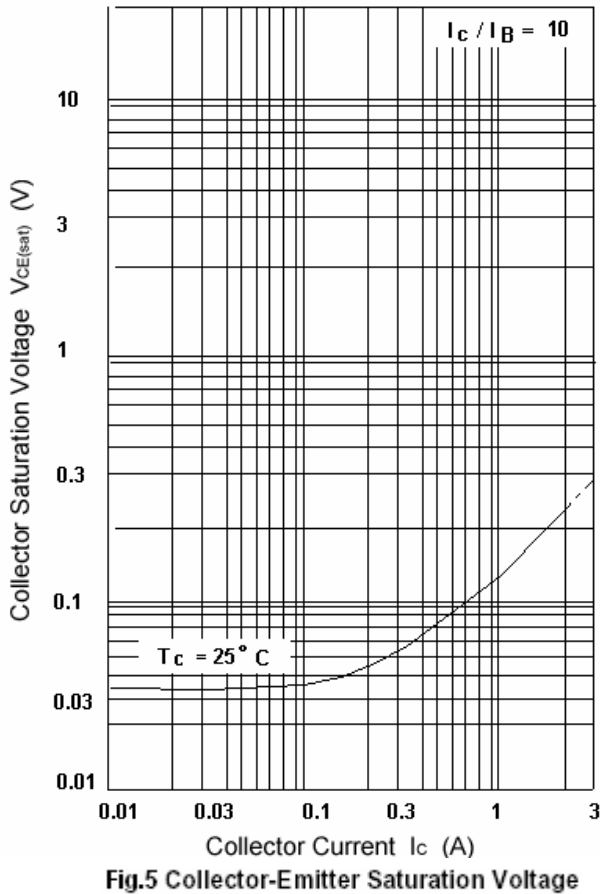
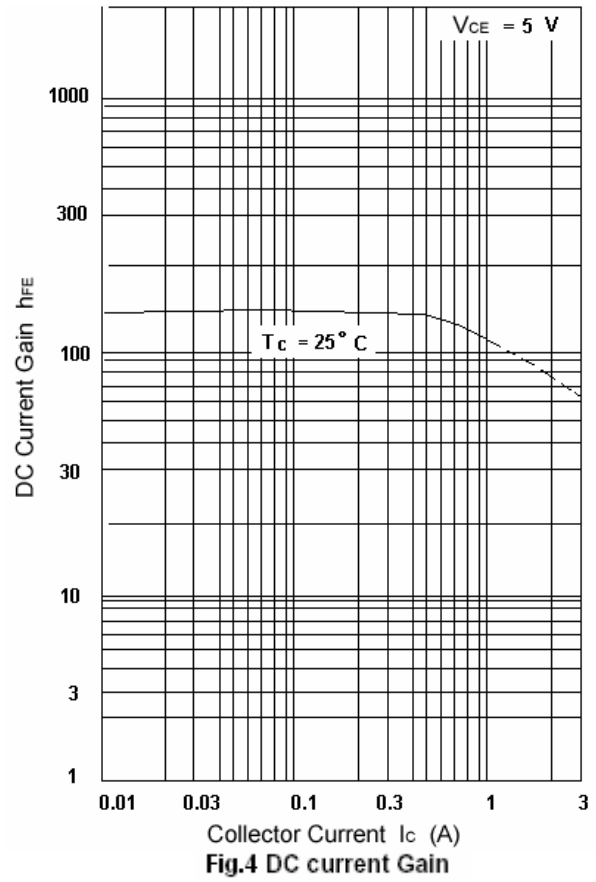
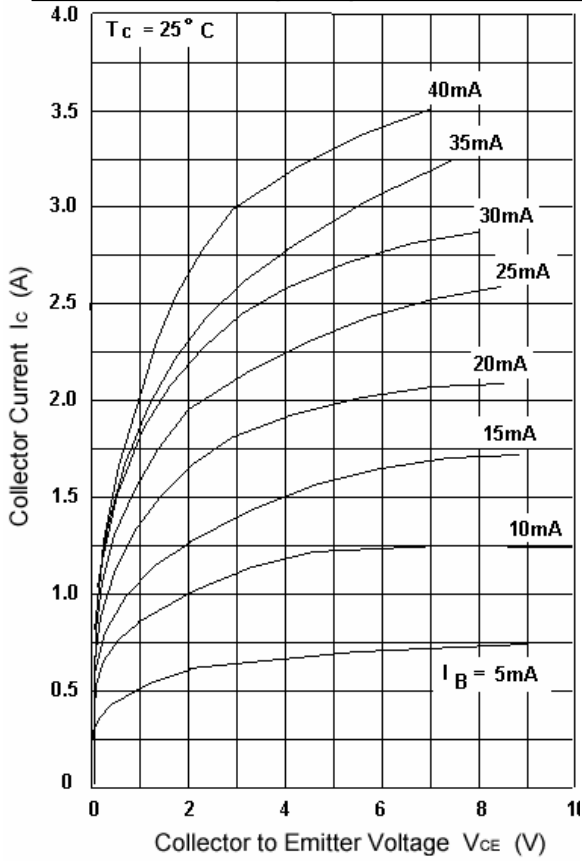


Fig.2 outline dimensions

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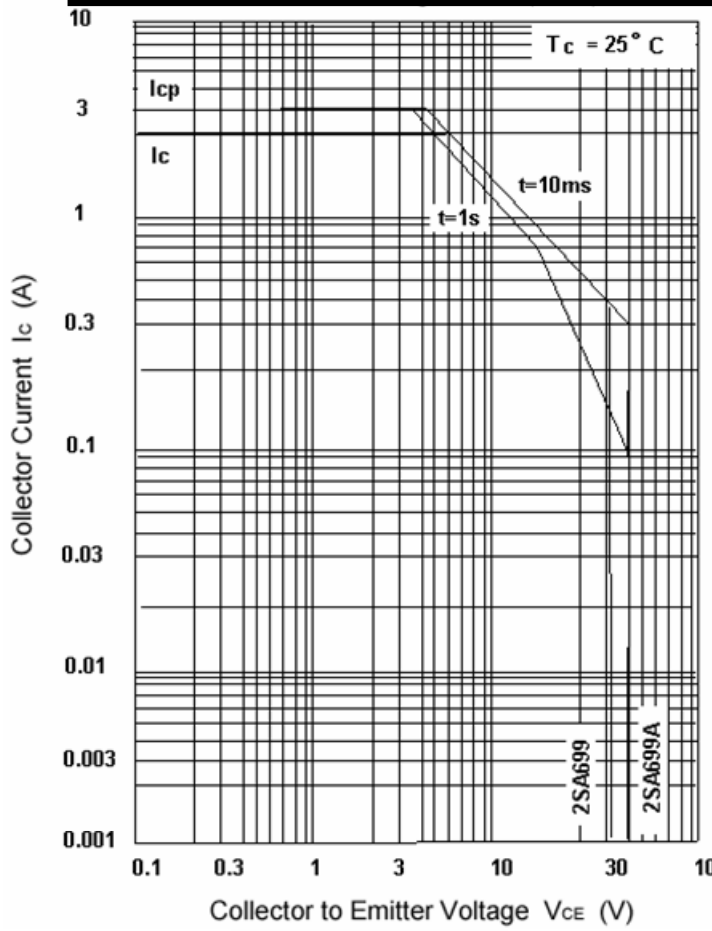


Fig.7 Safe Operating Area