

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

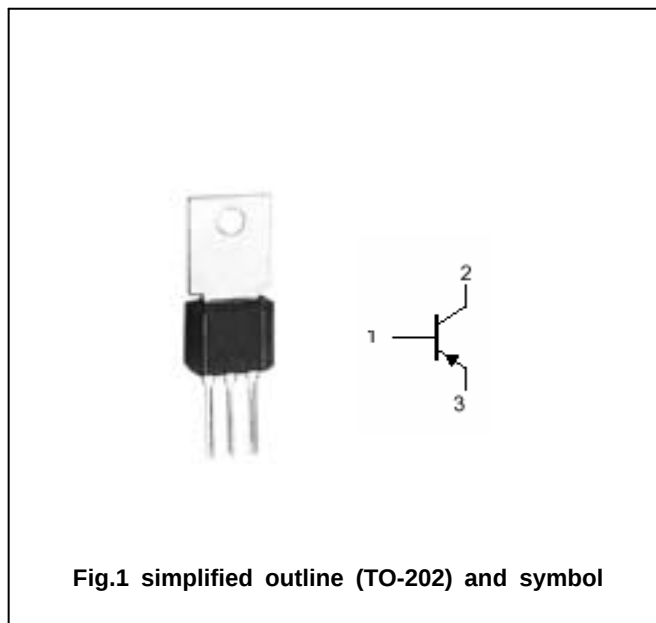


Fig.1 simplified outline (TO-202) and symbol

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SA699	Open emitter	-40	V
		2SA699A		-50	
V_{CEO}	Collector-emitter voltage	2SA699	Open base	-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		$T_C=25$	10	W
T_j	Junction temperature			150	
T_{stg}	Storage temperature			-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEsat}	Collector-emitter saturation voltage		I _C =-1.5A ; I _B =-0.15A		-0.4	-1.0	V
V _{BEsat}	Base-emitter saturation voltage		I _C =-2A ; I _B =-0.2 A			-1.5	V
V _{(BR)CBO}	Collector-base breakdown voltage	2SA699	I _C =-1mA; I _E =0	-40			V
		2SA699A		-50			
V _{(BR)CEO}	Collector-emitter breakdown voltage	2SA699	I _C =-10mA; I _B =0	-32			V
		2SA699A		-40			
I _{CBO}	Collector cut-off current		V _{CB} =-20V; I _E =0			-1	μ A
I _{CEO}	Collector cut-off current		V _{CE} =-12V; I _B =0			-100	μ A
I _{EBO}	Emitter cut-off current		V _{EB} =-5V; I _C =0			-100	μ A
h _{FE}	DC current gain		I _C =-1A ; V _{CE} =-5V	50		220	
C _{OB}	Output capacitance		I _E =0; V _{CB} =-5V; f=1MHz		70		pF
f _T	Transition frequency		I _E =0.5A ; V _{CB} =-5V		150		MHz

◆ h_{FE} classifications

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

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PACKAGE OUTLINE

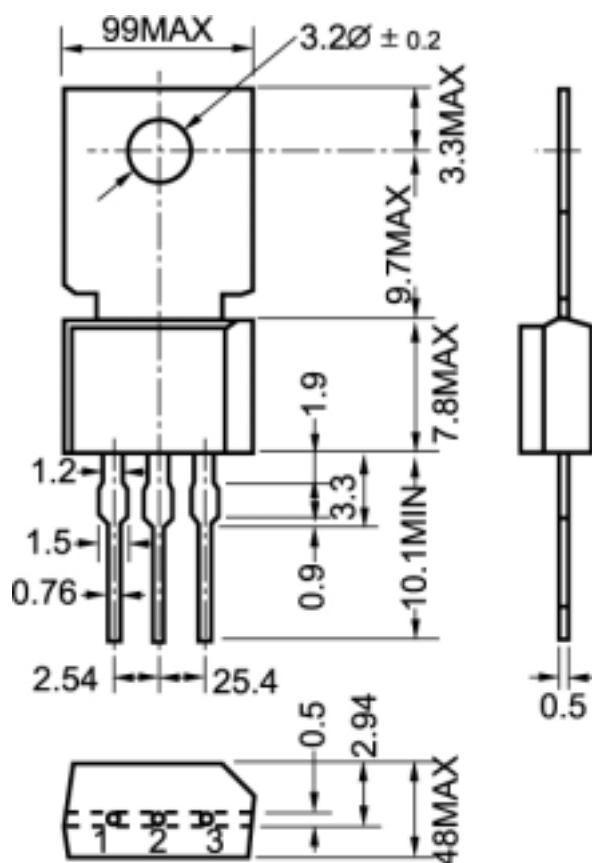
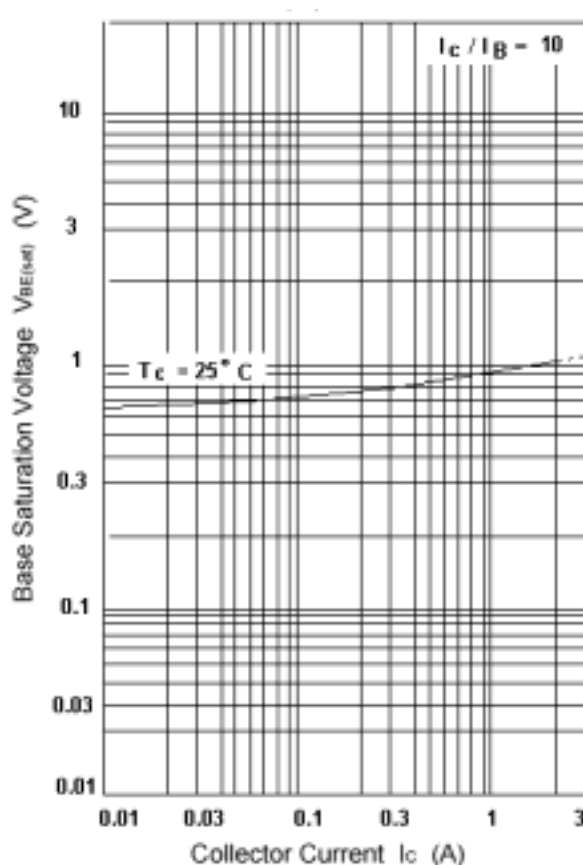
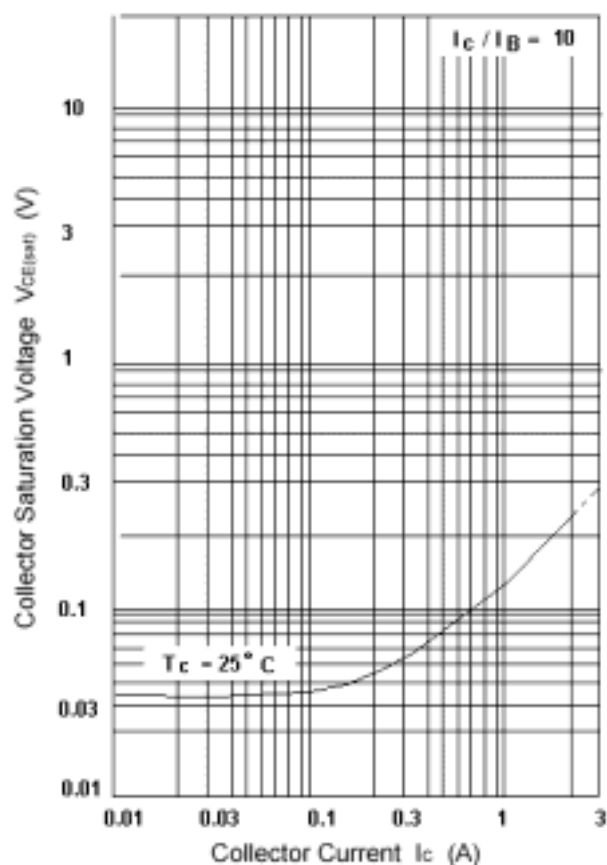
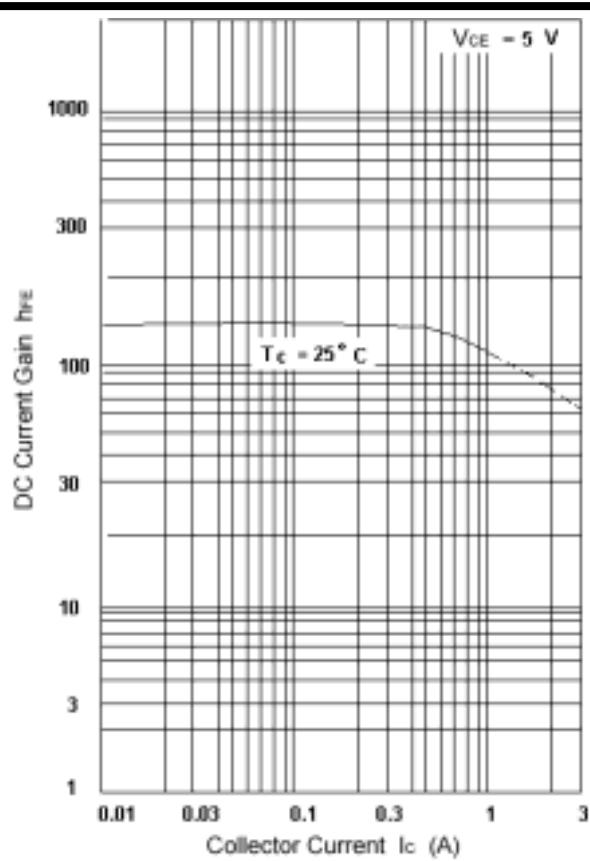
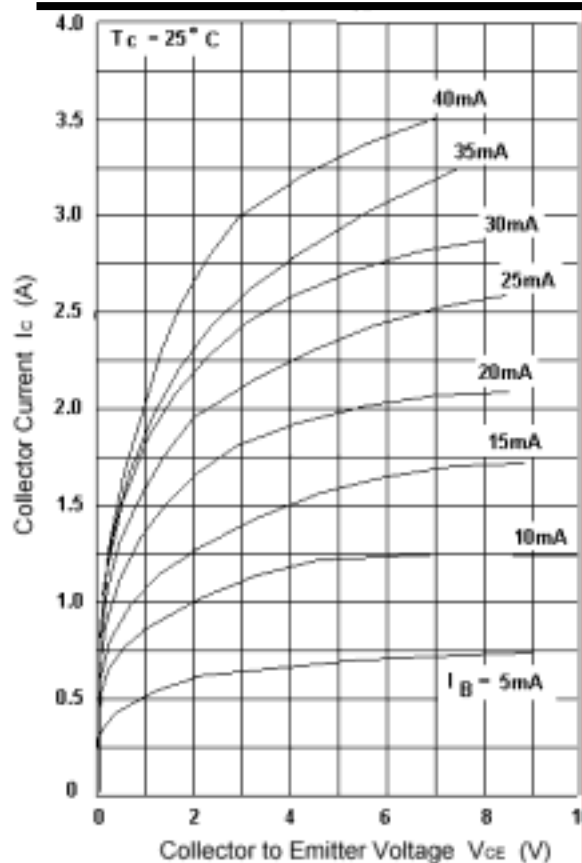


Fig.2 outline dimensions

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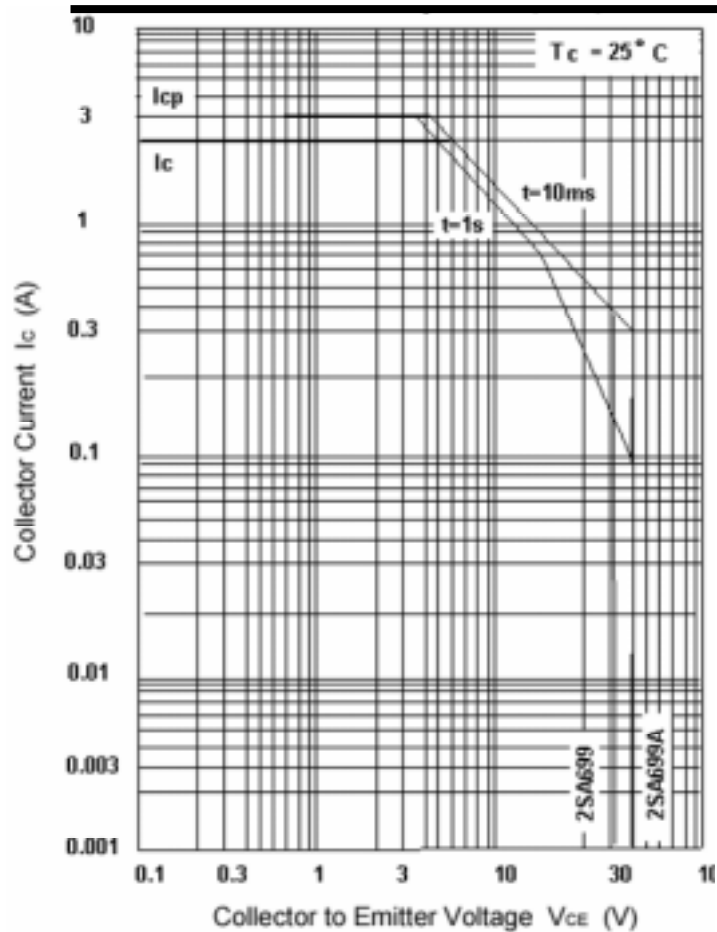


Fig.7 Safe Operating Area