

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

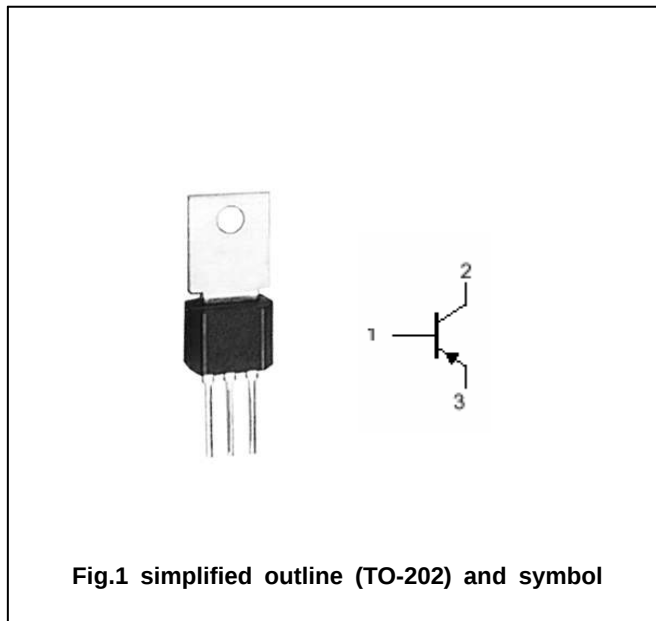


Fig.1 simplified outline (TO-202) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SA699	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		$T_C=25^{\circ}\text{C}$	10	W
T_j	Junction temperature			150	$^{\circ}\text{C}$
T_{stg}	Storage temperature			-55~150	$^{\circ}\text{C}$

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CHARACTERISTICS

Tj=25°C 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		$I_C=-2A$; $I_B=-0.2A$			-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	μA
I_{CEO}	Collector cut-off current		$V_{CE}=-12V$; $I_B=0$			-100	μA
I_{EBO}	Emitter cut-off current		$V_{EB}=-5V$; $I_C=0$			-100	μA
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

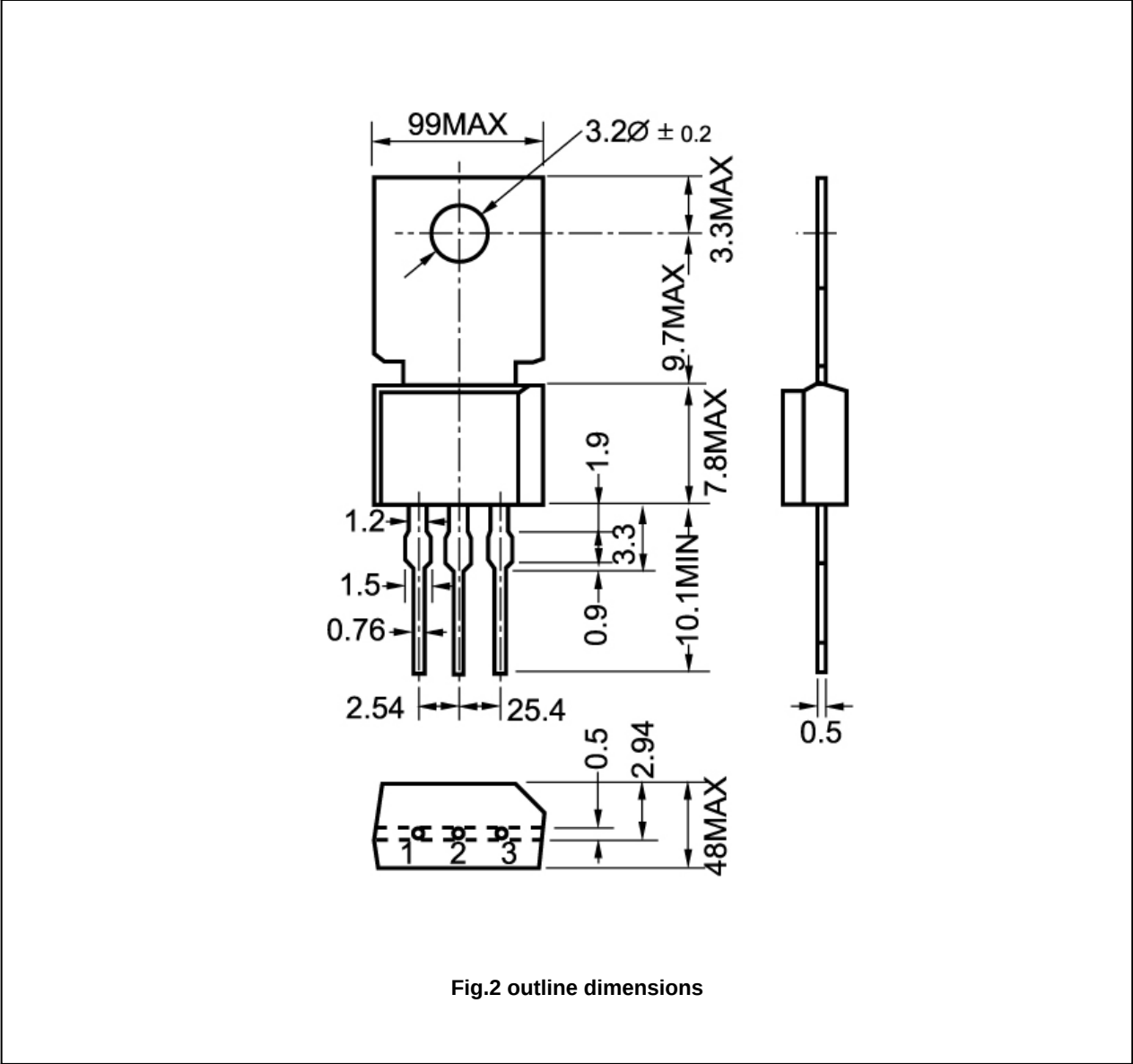
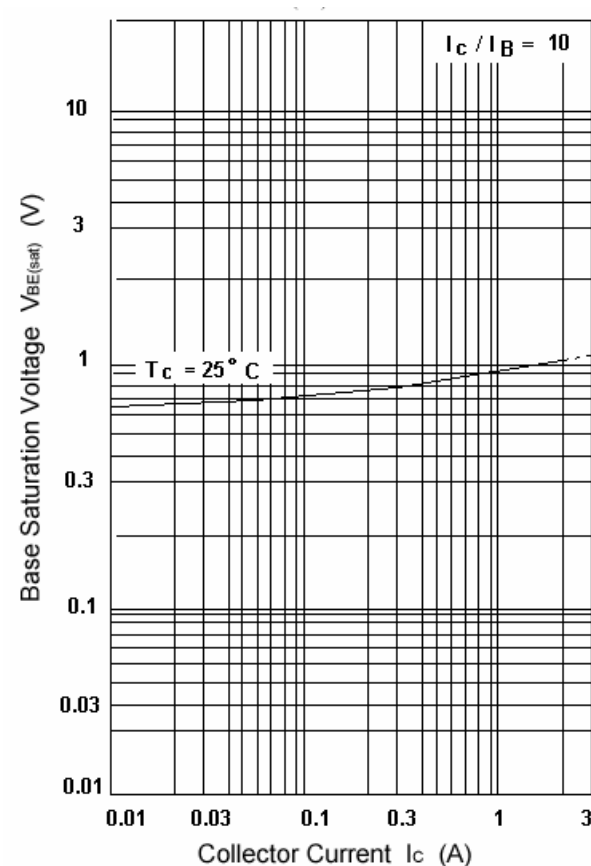
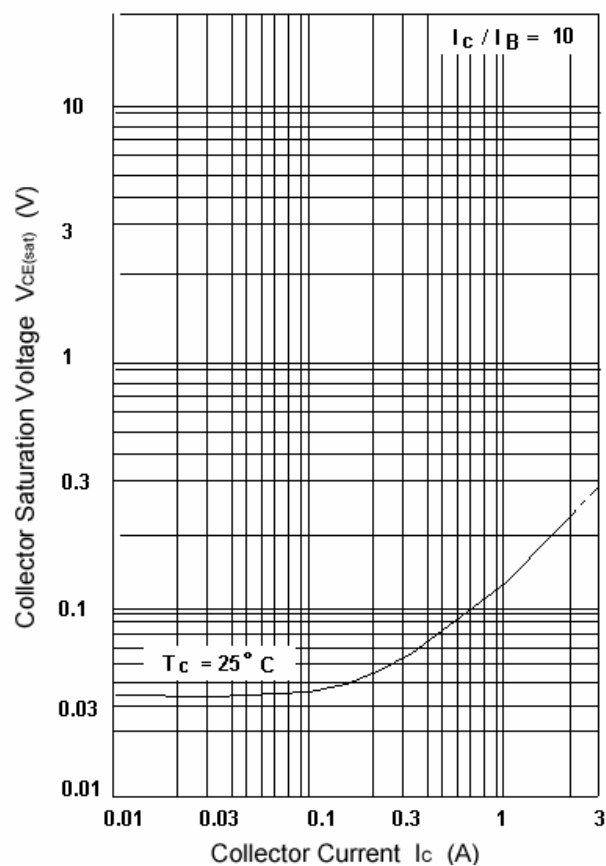
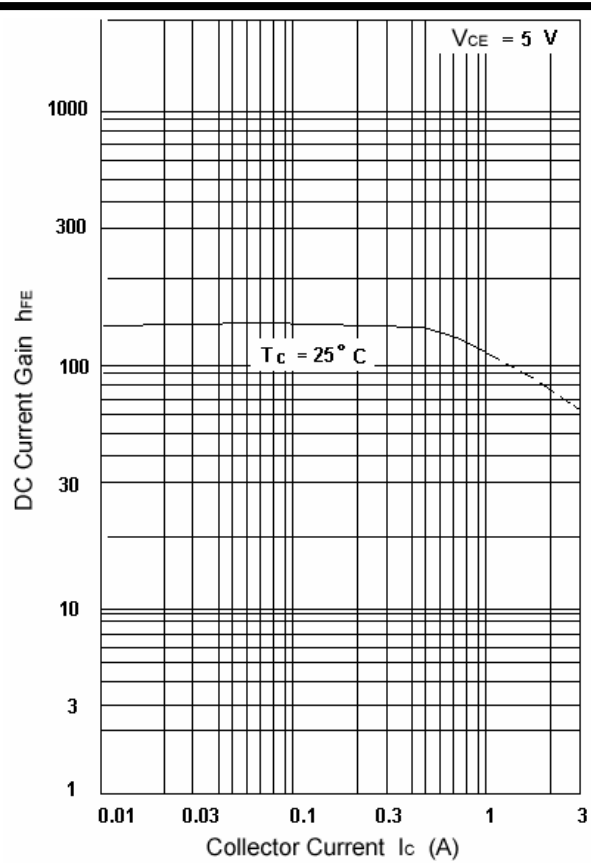
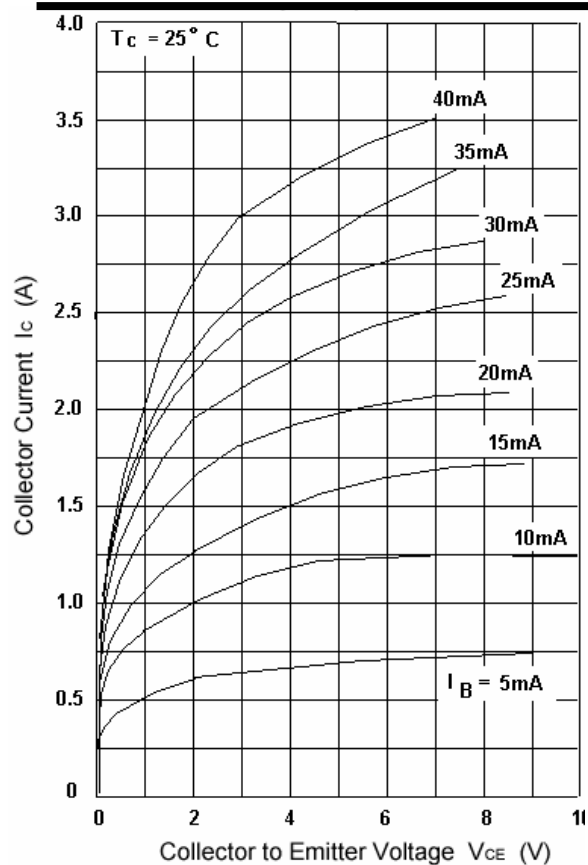


Fig.2 outline dimensions

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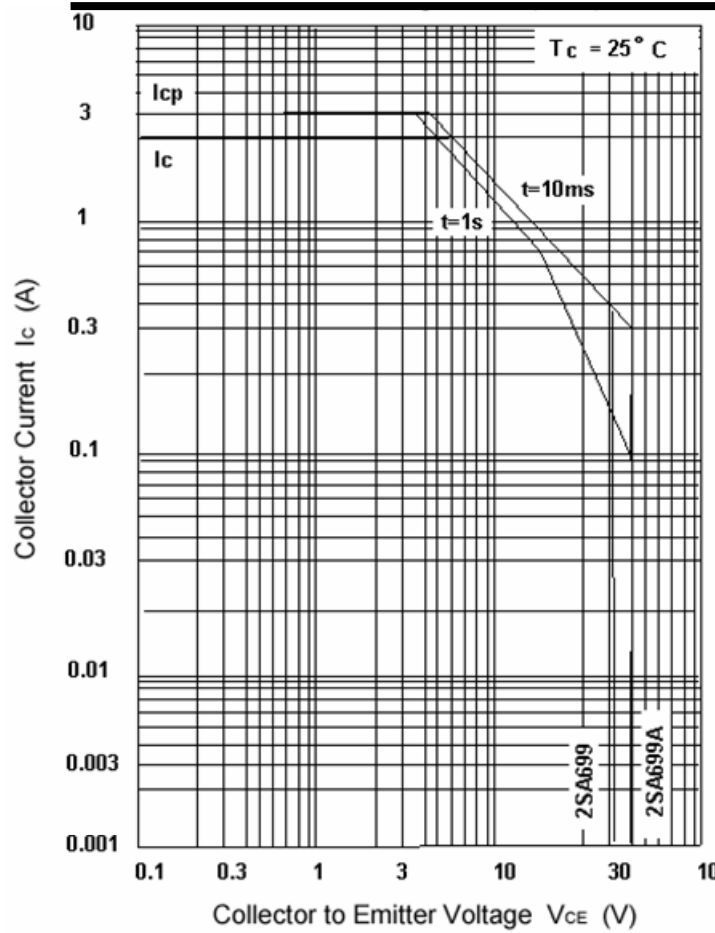


Fig.7 Safe Operating Area