

Inchange Semiconductor

Product Specification

Silicon PNP Power Transistors

2N4398 2N4399 2N5745

DESCRIPTION

- With TO-3 package
- Complement to type 2N5301/5302/5303
- Low collector saturation voltage
- Excellent safe operating area

APPLICATIONS

- For use in power amplifier and switching circuits applications.

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

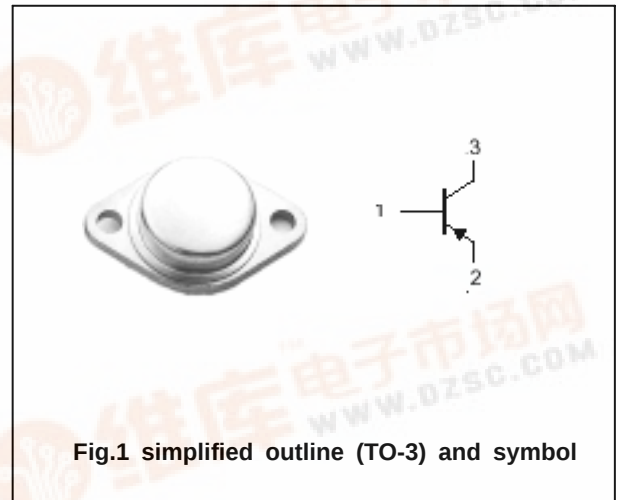


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings($T_a =$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N4398	Open emitter	-40	V
		2N4399		-60	
		2N5745		-80	
V_{CEO}	Collector-emitter voltage	2N4398	Open base	-40	V
		2N4399		-60	
		2N5745		-80	
V_{EBO}	Emitter-base voltage		Open collector	-5	V
I_C	Collector current	2N4398/4399		-30	A
		2N5745		-20	
I_B	Base current			-7.5	A
P_D	Total power dissipation		$T_C = 25$	200	W
T_j	Junction temperature			200	
T_{stg}	Storage temperature			-65~200	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	0.875	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	2N4398	I _C =-0.2A ; I _B =0	-40			V
		2N4399		-60			
		2N5745		-80			
V _{CEsat-1}	Collector-emitter saturation voltage	2N4398/4399	I _C =-10A ; I _B =-1A			-0.75	V
		2N5745				-1.0	
V _{CEsat-2}	Collector-emitter saturation voltage	2N4398/4399	I _C =-15A ; I _B =-1.5A			-1.0	V
		2N5745				-1.5	
V _{CEsat-3}	Collector-emitter saturation voltage	2N4398/4399	I _C =-20A ; I _B =-2A			-2.0	V
		2N5745	I _C =-20A ; I _B =-4A				
V _{CEsat-4}	Collector-emitter saturation voltage Only for 2N4398 2N4399		I _C =-30A ; I _B =-6A			-4.0	V
V _{BEsat-1}	Base-emitter saturation voltage	2N4398/4399	I _C =-10A ; I _B =-1A			-1.6	V
		2N5745				-1.7	
V _{BEsat-2}	Base-emitter saturation voltage	2N4398/4399	I _C =-15A ; I _B =-1.5A			-1.85	V
		2N5745				-2.0	
V _{BEsat-3}	Base-emitter saturation voltage	2N4398/4399	I _C =-20A ; I _B =-2A			-2.5	V
		2N5745	I _C =-20A ; I _B =-4A				
V _{BE-1}	Base-emitter on voltage	2N4398/4399	I _C =-15A ; V _{CE} =-2V			-1.7	V
		2N5745	I _C =-10A ; V _{CE} =-2V			-1.5	
V _{BE-2}	Base-emitter on voltage	2N4398/4399	I _C =-30A ; V _{CE} =-4V			-3.0	V
		2N5745	I _C =-20A ; V _{CE} =-4V			-2.5	
I _{CEX}	Collector cut-off current		V _{CE} = Rated V _{CEO} ; V _{BE(off)} =-1.5V T _C =150			-5 -10	mA
I _{CEO}	Collector cut-off current		V _{CE} =Rated V _{CEO} ; I _B =0			-5.0	mA
I _{EBO}	Emitter cut-off current		V _{EB} =-5V ; I _C =0			-5.0	mA
h _{FE-1}	DC current gain		I _C =-1A ; V _{CE} =-2V	40			
h _{FE-2}	DC current gain	2N5745	I _C =-10A ; V _{CE} =-2V	15		60	
		2N4398/4399	I _C =-15A ; V _{CE} =-2V				
h _{FE-3}	DC current gain	2N5745	I _C =-20A ; V _{CE} =-2V	5			
		2N4398/4399	I _C =-30A ; V _{CE} =-4V				
f _T	Transition frequency	2N4398/4399	I _C =-1A ; V _{CE} =-10V ; f=1.0MHz	4			MHz
		2N5745		2			

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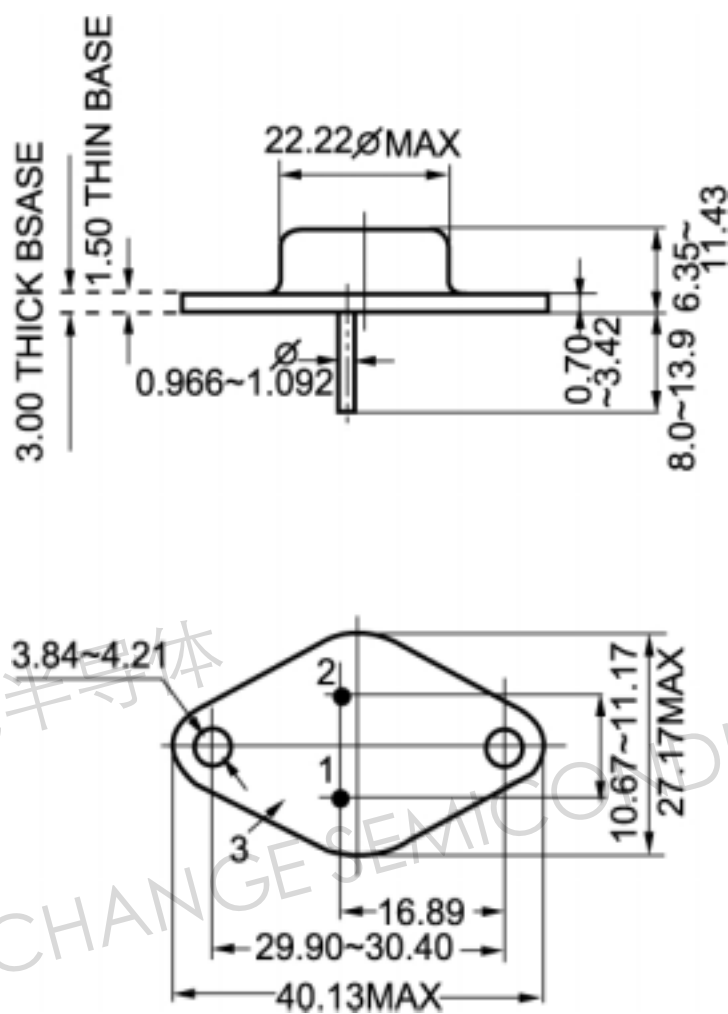


Fig.2 outline dimensions (unindicated tolerance: $\pm 0.1\text{mm}$)