

Silicon NPN Power Transistors

2N5885 2N5886

DESCRIPTION

- With TO-3 package
- Complement to type 2N5883 2N5884

APPLICATIONS

- They are intended for use in power linear and switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

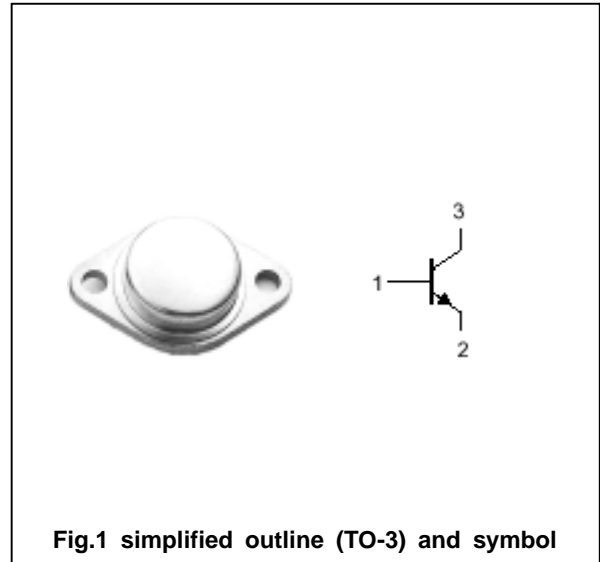


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	2N5885	60	V
		2N5886	80	
V _{CEO}	Collector-emitter voltage	2N5885	60	V
		2N5886	80	
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		25	A
I _{CM}	Collector current-peak		50	A
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 _{CE(sus)}	Collector-emitter sustaining voltage	2N5885	I _C =0.2A ; I _B =0			V
		2N5886				
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =15A; I _B =1.5A			1	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =25A; I _B =6.25A			4	V
V _{BEsat}	Collector-emitter saturation voltage	I _C =25A; I _B =6.25A			2.5	V
V _{BE}	Base-emitter on voltage	I _C =10A ; V _{CE} =4V			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =ratedV _{CE} ; I _B =0			1	mA
I _{CEO}	Collector cut-off current	2N5885			2	mA
		2N5886				
I _{CEV}	Collector cut-off current (V _{BE(off)} =1.5V)	V _{CE} =ratedV _{CE} ;			1	mA
		V _{CE} =ratedV _{CE} ; T _C =150				
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1	mA
h _{FE-1}	DC current gain	I _C =3A ; V _{CE} =4V	35			
h _{FE-2}	DC current gain	I _C =10A ; V _{CE} =4V	20		100	
h _{FE-3}	DC current gain	I _C =25A ; V _{CE} =4V	4			
f _T	Transistion frequency	I _C =1A ; V _{CE} =10V;f=1MHz	4			MHz

Switching times

t _r	Rise time	I _C =10A ; I _{B1} =- I _{B2} =1A V _{CC} =30V			0.7	μs
t _s	Storage time				1.0	μs
t _f	Fall time				0.8	μs

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PACKAGE OUTLINE

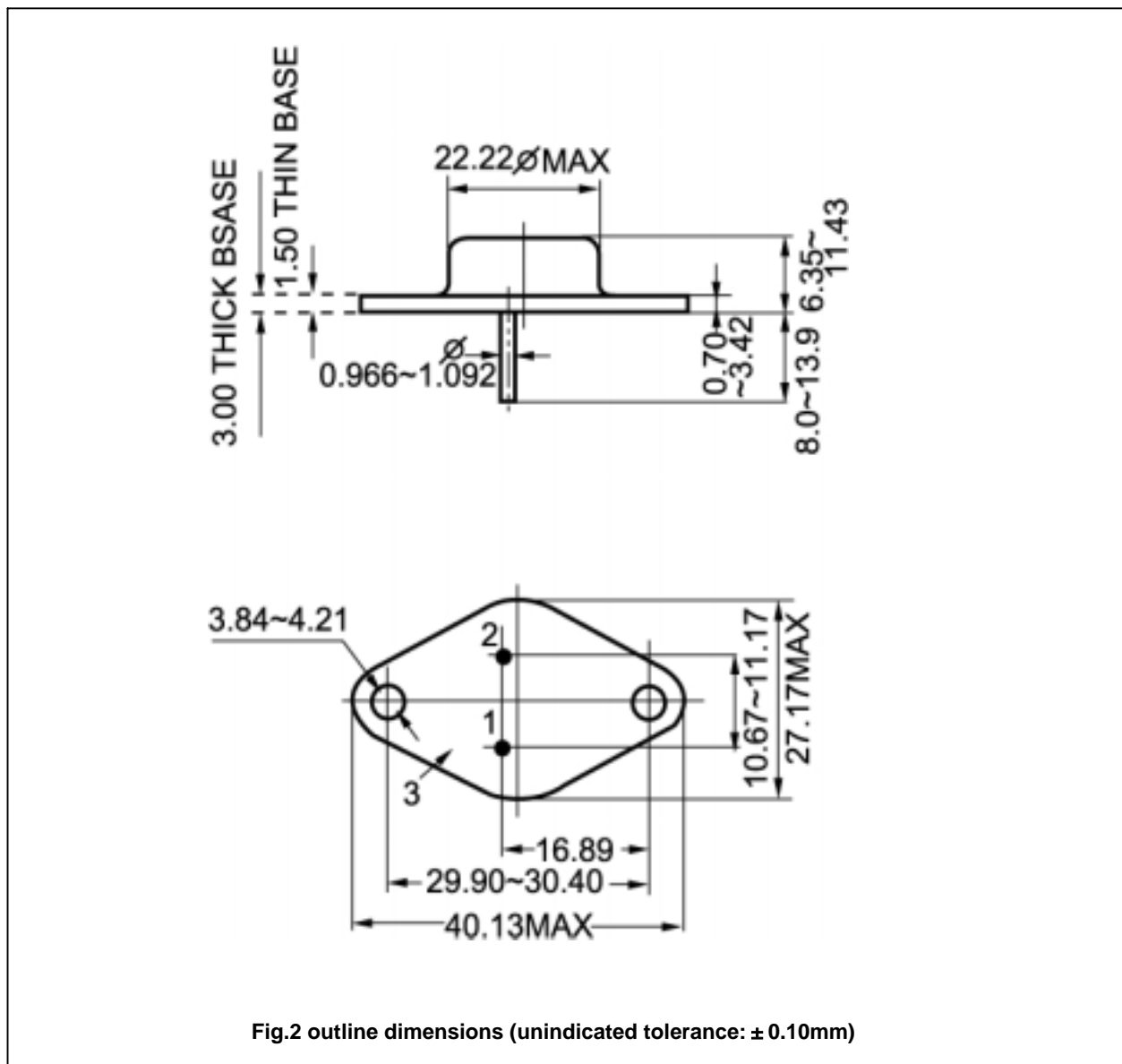


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)