

Silicon PNP Power Transistors

2N4904 2N4905 2N4906

DESCRIPTION

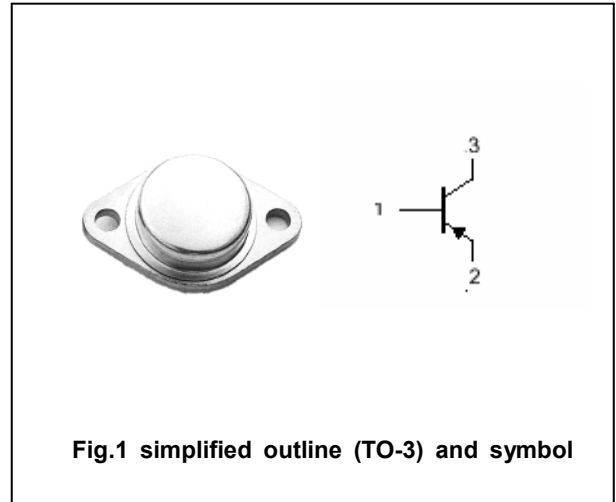
- With TO-3 package
- Complement to type 2N4913/4914/4915
- Low collector saturation voltage

APPLICATIONS

- For general-purpose switching and power amplifier applications.

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N4904	-40	V
		2N4905	-60	
		2N4906	-80	
V_{CEO}	Collector-emitter voltage	2N4904	-40	V
		2N4905	-60	
		2N4906	-80	
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current		-5	A
I_B	Base current		-1	A
P_D	Total power dissipation	$T_c=25^\circ\text{C}$	87.5	W
T_j	Junction temperature		200	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	2.0	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	2N4904	I _C =-0.2A ; I _B =0	-40			V
		2N4905		-60			
		2N4906		-80			
V _{CE(sat)-1}	Collector-emitter saturation voltage		I _C =-2.5A ; I _B =-0.25A			-1.0	V
V _{CE(sat)-2}	Collector-emitter saturation voltage		I _C =-5A ; I _B =-1A			-1.5	V
V _{BE(on)}	Base-emitter on voltage		I _C =-2.5A ; V _{CE} =-2V			-1.4	V
I _{CEO}	Collector cut-off current		V _{CE} =Rated V _{CEO} ; I _B =0			-1.0	mA
I _{CBO}	Collector cut-off current		V _{CB} =Rated V _{CBO} ; I _E =0			-0.1	mA
I _{CEV}	Collector cut-off current		V _{CE} = Rated V _{CEO} ; V _{BE(off)} =-1.5V T _C =150°C			-0.1 -2.0	mA
I _{EBO}	Emitter cut-off current		V _{EB} =-5V ; I _C =0			-1.0	mA
h _{FE-1}	DC current gain		I _C =-2.5A ; V _{CE} =-2V	25		100	
h _{FE-2}	DC current gain		I _C =-5A ; V _{CE} =-2V	7			
f _T	Transition frequency		I _C =-1A ; V _{CE} =-10V ; f=1.0MHz	4			MHz

PACKAGE OUTLINE

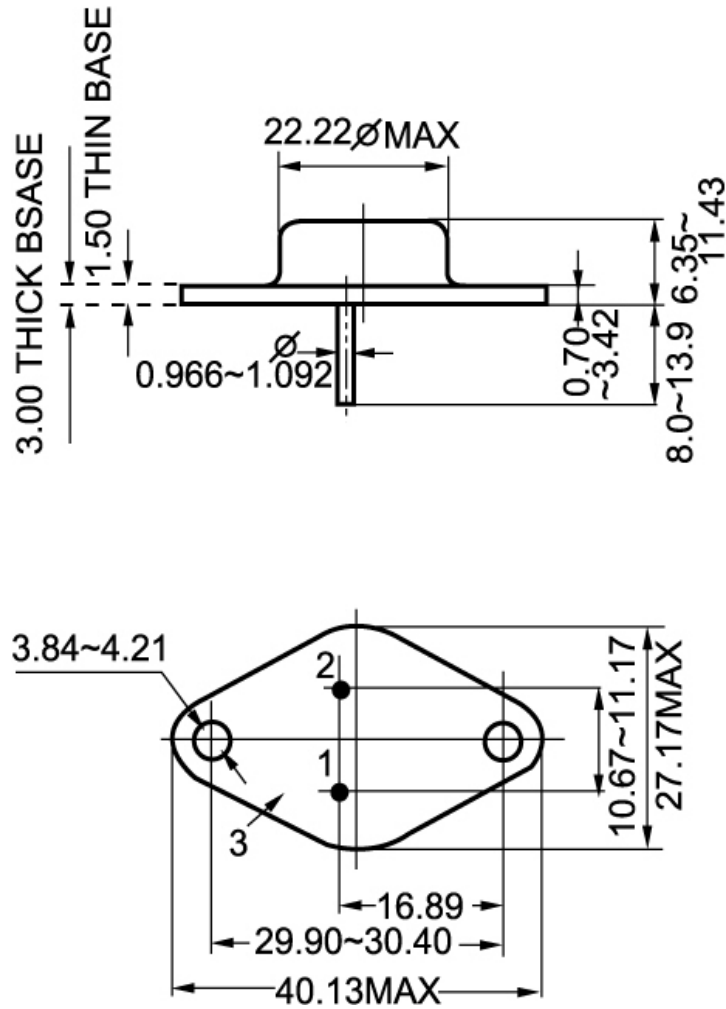


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)