

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

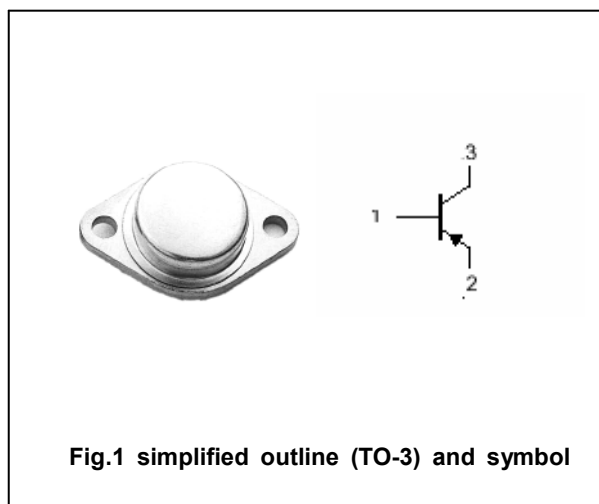


Fig.1 simplified outline (TO-3) and symbol

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2N4904	-40	V
		2N4905	-60	
		2N4906	-80	
V <sub>CEO</sub>	Collector-emitter voltage	2N4904	-40	V
		2N4905	-60	
		2N4906	-80	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-5	A
I <sub>B</sub>	Base current		-1	A
P <sub>D</sub>	Total power dissipation	T <sub>C</sub> =25°C	87.5	W
T <sub>j</sub>	Junction temperature		200	°C
T <sub>stg</sub>	Storage temperature		-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	2.0	°C/W

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	2N4904	-40			V
		2N4905	-60			
		2N4906	-80			
V <sub>CE(sat)-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-2.5A; I <sub>B</sub> =-0.25A			-1.0	V
V <sub>CE(sat)-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-5A; I <sub>B</sub> =-1A			-1.5	V
V <sub>BE(on)</sub>	Base-emitter on voltage	I <sub>C</sub> =-2.5A; V <sub>CE</sub> =-2V			-1.4	V
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =Rated V <sub>CE0</sub> ; I <sub>B</sub> =0			-1.0	mA
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =Rated V <sub>CBO</sub> ; I <sub>E</sub> =0			-0.1	mA
I <sub>CEV</sub>	Collector cut-off current	V <sub>CE</sub> = Rated V <sub>CE0</sub> ; V <sub>BE(off)</sub> =-1.5V T <sub>C</sub> =150°C			-0.1 -2.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-1.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-2.5A; V <sub>CE</sub> =-2V	25		100	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-5A; V <sub>CE</sub> =-2V	7			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-1A; V <sub>CE</sub> =-10V; f=1.0MHz	4			MHz

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PACKAGE OUTLINE

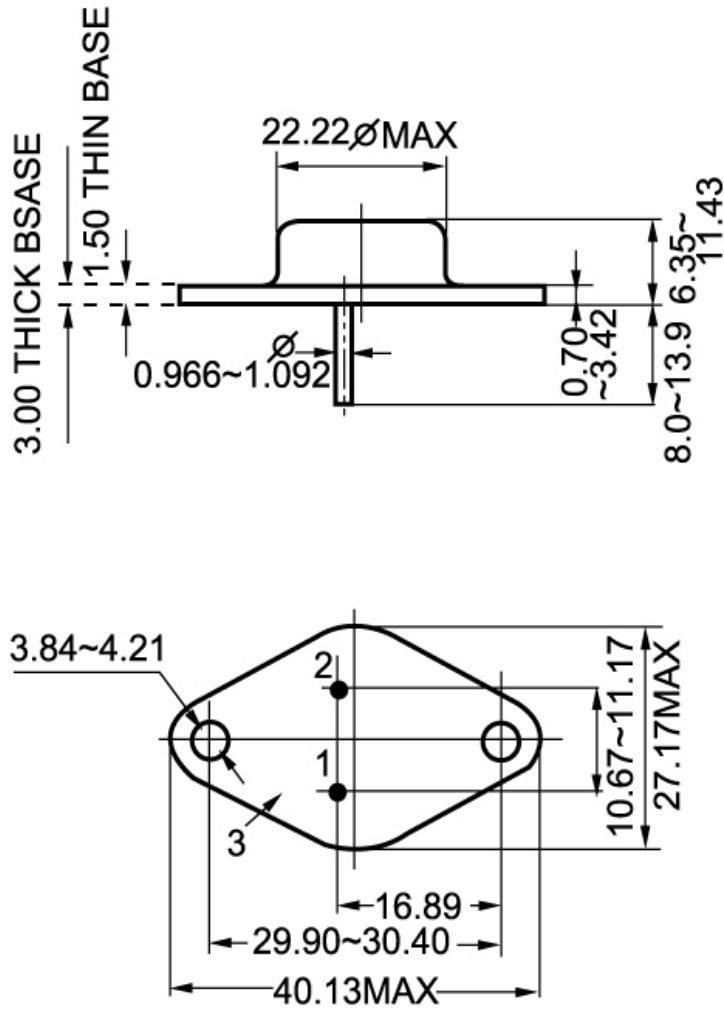


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)