

Silicon PNP Power Transistors

2SB904

DESCRIPTION

- With TO-3PN package
- Complement to type 2SD1213
- Low collector saturation voltage
- Large current capacity

APPLICATIONS

- Large current switching of relay drivers, high-speed inverters, converters

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

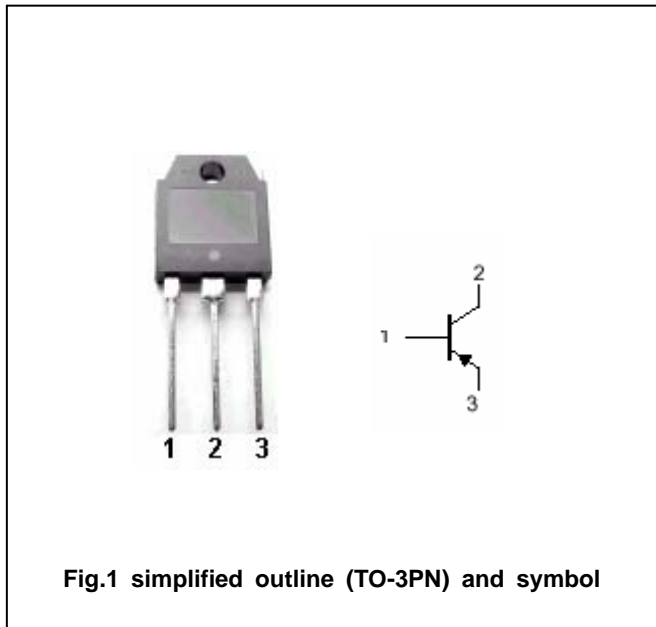


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Tc=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-60	V
V_{CEO}	Collector-emitter voltage	Open base	-30	V
V_{EBO}	Emitter-base voltage	Open collector	-6	V
I_C	Collector current		-20	A
I_{CM}	Collector current-peak		-30	A
P_C	Collector power dissipation	$T_C=25^\circ C$	60	W
		$T_a=25^\circ C$	2.5	
T_j	Junction temperature		150	°C
T_{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =-1mA ; R _{BE} =∞	-30			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =-1mA ; I _E =0	-60			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =-1mA ; I _C =0	-6			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =-8A ; I _B =-0.4A		-0.25	-0.5	V
I _{CBO}	Collector cut-off current	V _{CB} =-40V ; I _E =0			-0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =-4V ; I _C =0			-0.1	mA
h _{FE-1}	DC current gain	I _C =-1A ; V _{CE} =-2V	70		280	
h _{FE-2}	DC current gain	I _C =-10A ; V _{CE} =-2V	30			
f _T	Transition frequency	I _C =-1A ; V _{CE} =-5V		120		MHz

Switching times

t _{on}	Turn-on time	I _C =-10A ; I _{B1} =-I _{B2} =-0.5A V _{CC} =-10V ; R _L =1 Ω		0.3		μ s
t _{stg}	Storage time			0.3		μ s
t _f	Fall time			0.02		μ s

◆ h_{FE-1} Classifications

Q	R	S
70-140	100-200	140-280

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PACKAGE OUTLINE

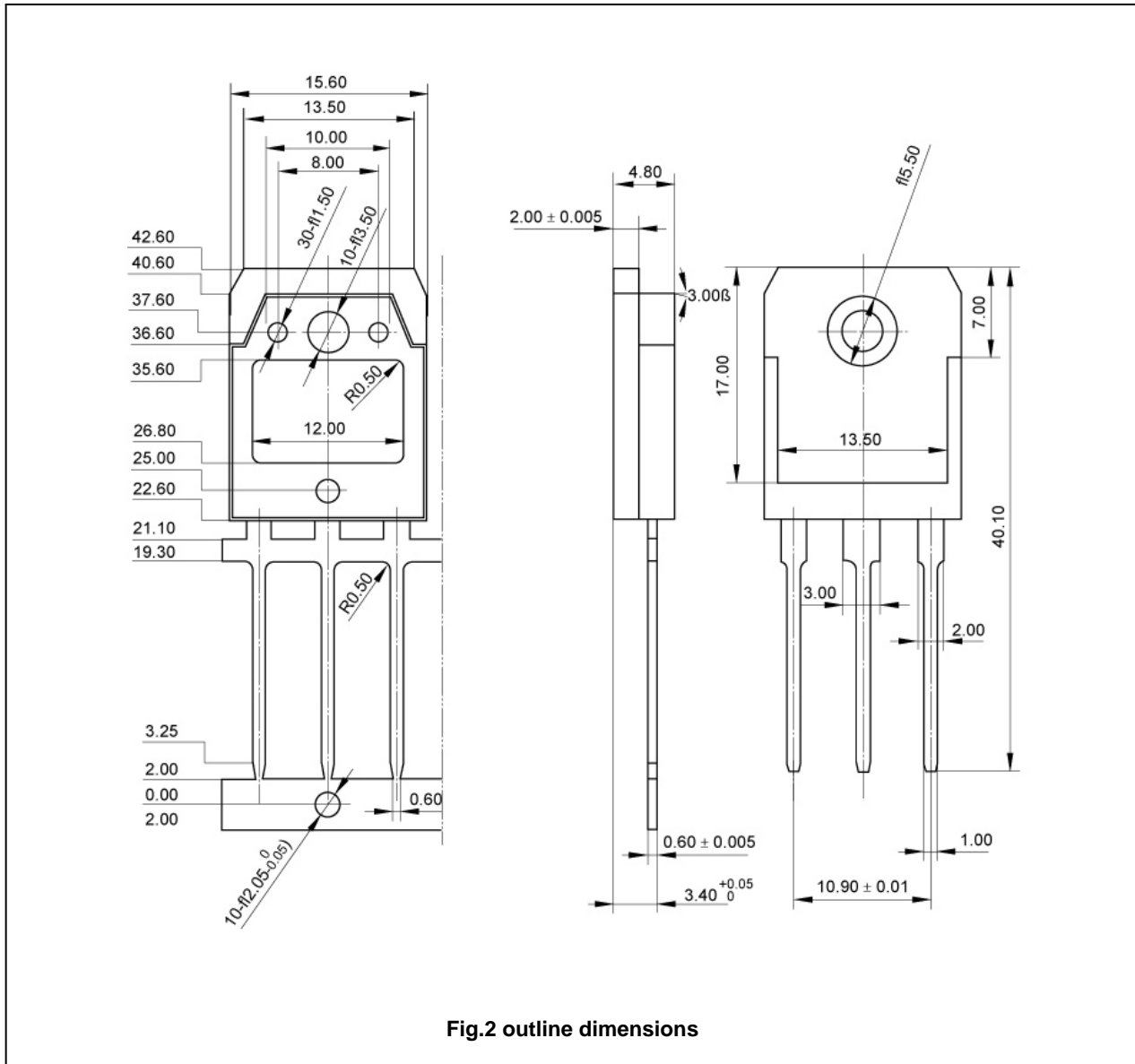


Fig.2 outline dimensions