

**Silicon NPN Power Transistors**

**2SC1904**

**DESCRIPTION**

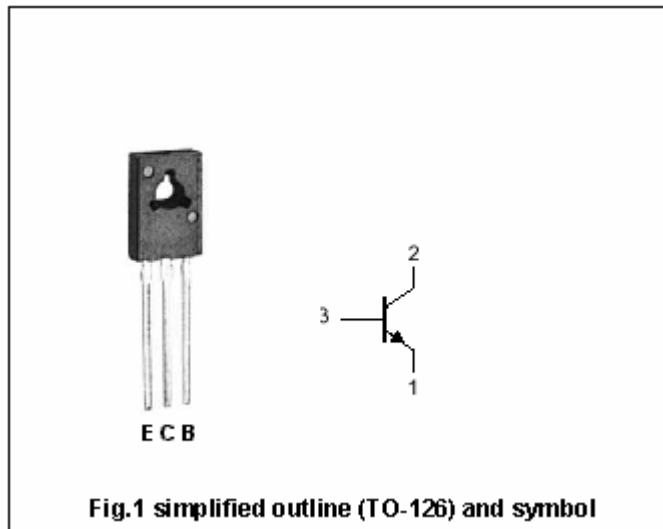
- With TO-126 package
- Complement to type 2SA899

**APPLICATIONS**

- For high frequency power amplification

**PINNING**

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



**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CB0</sub>	Collector-base voltage	Open emitter	150	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	150	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current (DC)		50mA	A
P <sub>D</sub>	Total power dissipation	T <sub>C</sub> =25°C	1	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°C

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =1mA; R <sub>BE</sub> =∞	150			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =10μA; I <sub>E</sub> =0	150			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =10μA; I <sub>C</sub> =0	5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10mA; I <sub>B</sub> =1mA			0.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =10mA; I <sub>B</sub> =1mA			1.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =140V; I <sub>E</sub> =0			1	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =4V; I <sub>C</sub> =0			1	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =10mA; V <sub>CE</sub> =5V	35		500	
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =10V; f=1MHz		3		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =10mA; V <sub>CE</sub> =5V		70		MHz

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PACKAGE OUTLINE

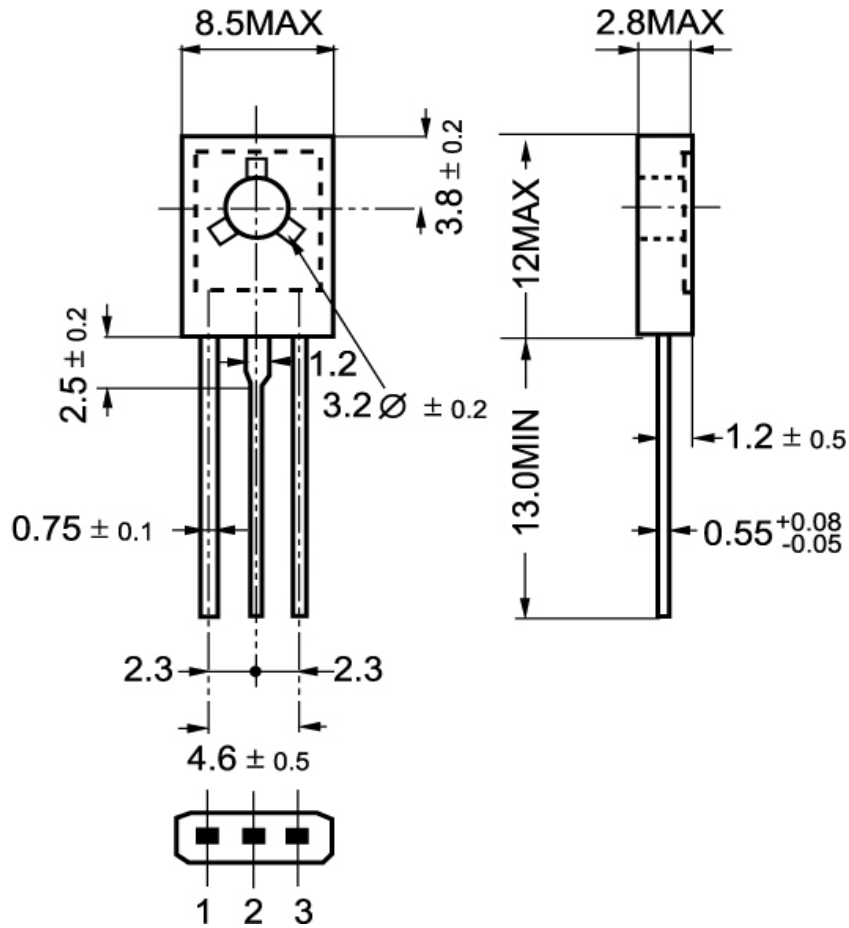


Fig.2 Outline dimensions