

**Silicon NPN Power Transistors**

**2N6098 2N6099 2N6100 2N6101**

**DESCRIPTION**

- With TO-220 package
- High current capability

**APPLICATIONS**

- For use in general-purpose amplifier and switching applications

**PINNING**

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

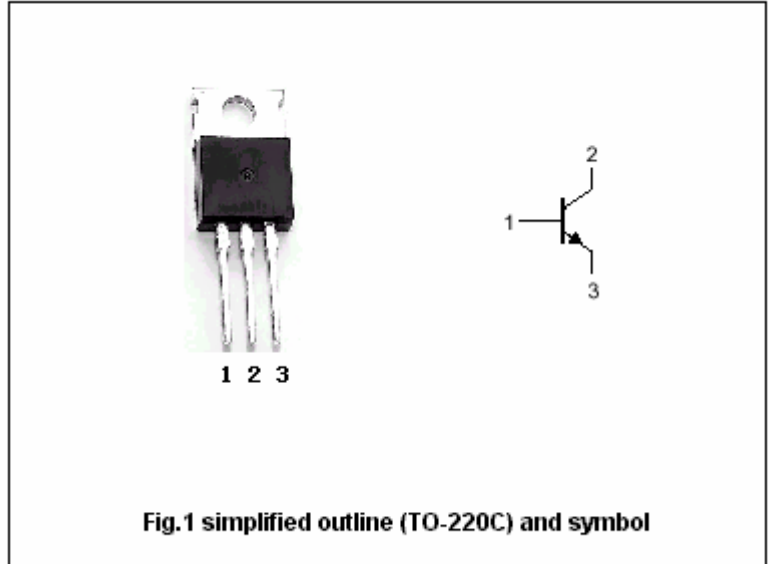


Fig.1 simplified outline (TO-220C) and symbol

**Absolute maximum ratings(Ta=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT	
V <sub>CBO</sub>	Collector-base voltage	Open emitter	2N6098	70	V
			2N6099	70	
			2N6100	80	
			2N6101	80	
V <sub>CEO</sub>	Collector-emitter voltage	Open base	2N6098	70	V
			2N6099	70	
			2N6100	80	
			2N6101	80	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	8	V	
I <sub>C</sub>	Collector current		10	A	
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25	75	W	
T <sub>j</sub>	Junction temperature		150		
T <sub>stg</sub>	Storage temperature		-65~150		

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance from junction to case	1.67	/W

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**CHARACTERISTICS**T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	2N6098	I <sub>C</sub> =0.1A ; I <sub>B</sub> =0	70			V
		2N6099		70			
		2N6100		80			
		2N6101		80			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =5A ; I <sub>B</sub> =0.5A			1.3	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =10A ; I <sub>B</sub> =2.5A			3.5	V
V <sub>BE</sub>	Base-emitter on voltage	2N6098/6099	I <sub>C</sub> =4A ; V <sub>CE</sub> =4V			1.3	V
		2N6100/6101	I <sub>C</sub> =5A ; V <sub>CE</sub> =4V				
I <sub>CBO</sub>	Collector cut-off current		V <sub>CB</sub> =Rated V <sub>CBO</sub> ; I <sub>E</sub> =0 T <sub>C</sub> =150			0.5 2.0	mA
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =8V ; I <sub>C</sub> =0			1.0	mA
h <sub>FE</sub>	DC current gain	2N6098/6099	I <sub>C</sub> =4A ; V <sub>CE</sub> =4V	20		80	
		2N6100/6101	I <sub>C</sub> =5A ; V <sub>CE</sub> =4V				
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =1A ; V <sub>CE</sub> =10V	0.8			MHz

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PACKAGE OUTLINE

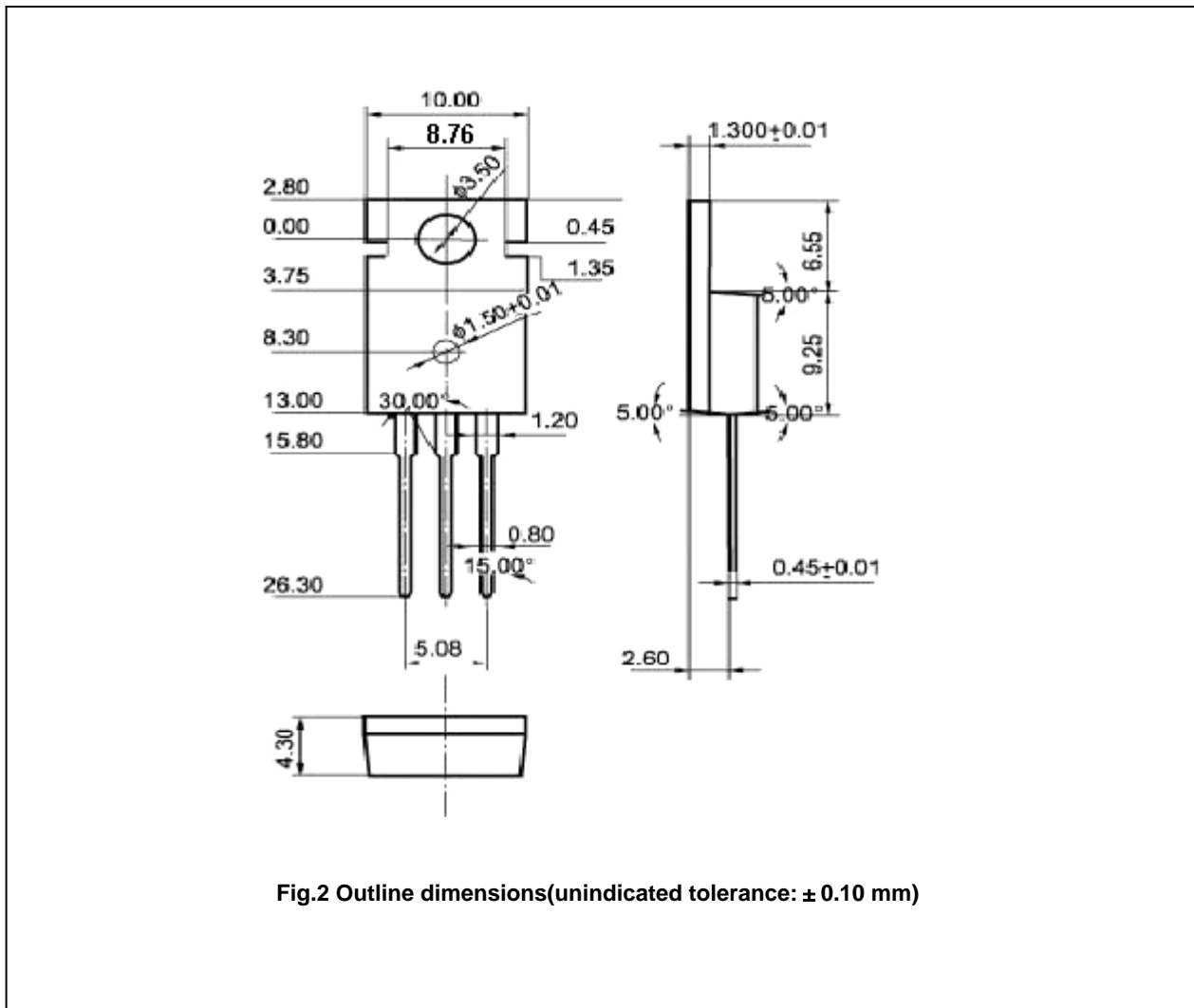


Fig.2 Outline dimensions(unindicated tolerance:  $\pm 0.10$  mm)