

**Silicon NPN Power Transistors 2N5490 2N5492 2N5494 2N5496**

**DESCRIPTION**

- With TO-220 package
- High power dissipation

**APPLICATIONS**

- For used in medium power and amplifier applications

**PINNING**

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

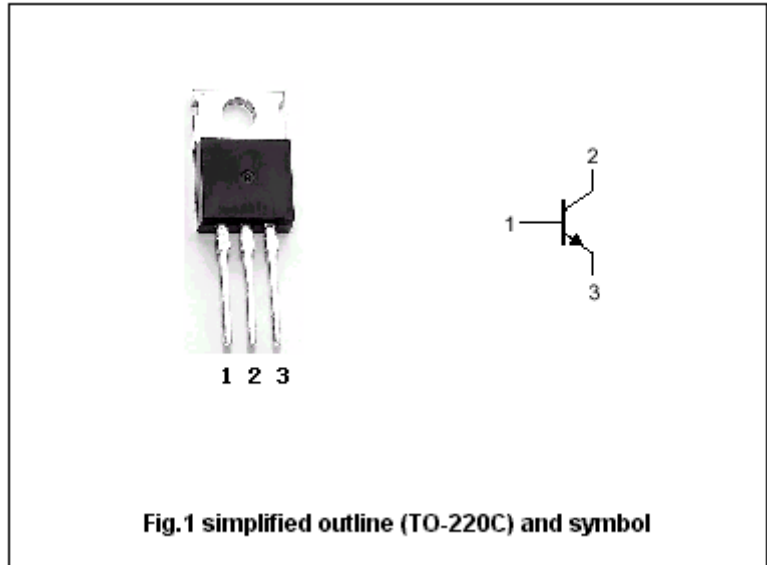


Fig.1 simplified outline (TO-220C) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CB0</sub>	Collector-base voltage	2N5490/5494	60	V
		2N5492	75	
		2N5496	90	
V <sub>CEO</sub>	Collector-emitter voltage	2N5490/5494	40	V
		2N5492	55	
		2N5496	70	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		7	A
I <sub>B</sub>	Base current		3	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25	50	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	2.5	/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 sustioning voltage	2N5490/5494	I <sub>C</sub> =0.1A ; I <sub>B</sub> =0			V
		2N5492				
		2N5496				
V <sub>CEsat</sub>	Collector-emitter saturation voltage	2N5490	I <sub>C</sub> =2.0A ; I <sub>B</sub> =0.2A		1.0	V
		2N5492	I <sub>C</sub> =2.5A ; I <sub>B</sub> =0.25A			
		2N5494	I <sub>C</sub> =3.0A ; I <sub>B</sub> =0.3A			
		2N5496	I <sub>C</sub> =3.5A ; I <sub>B</sub> =0.35A			
V <sub>BE</sub>	Base-emitter on voltage	2N5490	I <sub>C</sub> =2.0A ; V <sub>CE</sub> =4V		1.1	V
		2N5492	I <sub>C</sub> =2.5A ; V <sub>CE</sub> =4V			
		2N5494	I <sub>C</sub> =3.0A ; V <sub>CE</sub> =4V			
		2N5496	I <sub>C</sub> =3.5A ; V <sub>CE</sub> =4V			
I <sub>CEV</sub>	Collector cut-off current	2N5492	V <sub>CE</sub> =70V ; V <sub>BE</sub> =1.5V		1.0	mA
		2N5490/5494	V <sub>CE</sub> =55V ; V <sub>BE</sub> =1.5V			
		2N5496	V <sub>CE</sub> =85V ; V <sub>BE</sub> =1.5V			
I <sub>CER</sub>	Collector cut-off current	V <sub>CE</sub> =Rated V <sub>CEO</sub> ; R <sub>BE</sub> =100			0.5	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</sub>	DC current gain	2N5490	I <sub>C</sub> =2.0A ; V <sub>CE</sub> =4V	20	100	
		2N5492	I <sub>C</sub> =2.5A ; V <sub>CE</sub> =4V			
		2N5494	I <sub>C</sub> =3.0A ; V <sub>CE</sub> =4V			
		2N5496	I <sub>C</sub> =3.5A ; V <sub>CE</sub> =4V			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =4V	0.8			MHz

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PACKAGE OUTLINE

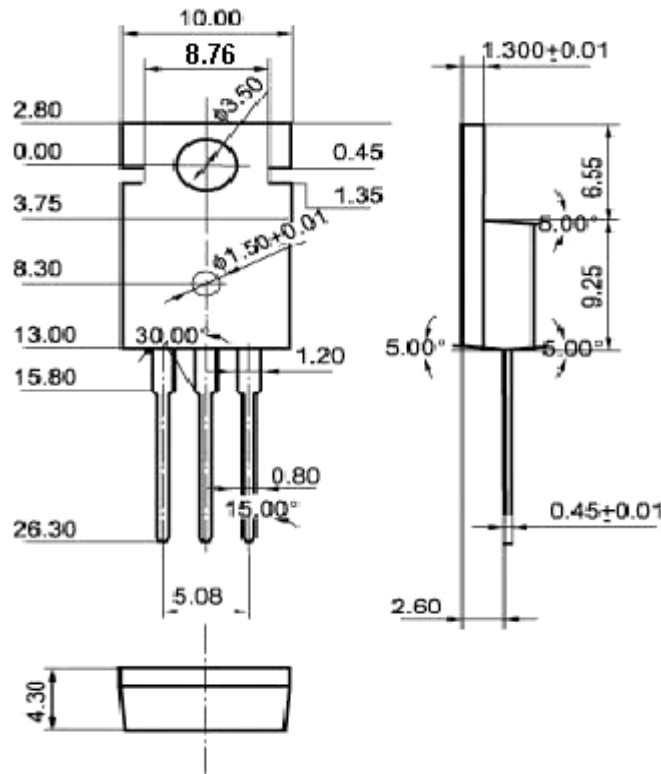


Fig.2 Outline dimensions(unindicated tolerance:  $\pm 0.10$  mm)