

**Silicon PNP Power Transistors**

**2N6489 2N6490 2N6491**

**DESCRIPTION**

- With TO-220 package
- Excellent safe operating area
- Complement to type 2N6486 2N6487 2N6488 respectively

**APPLICATIONS**

- Power amplifier and medium speed switching applications

**PINNING**

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

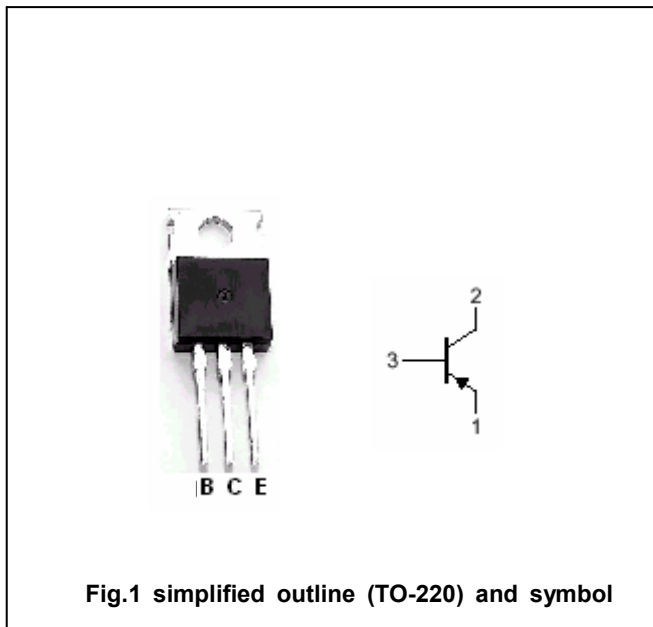


Fig.1 simplified outline (TO-220) and symbol

**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2N6489	-50	V
		2N6490	-70	
		2N6491	-90	
V <sub>CEO</sub>	Collector-emitter voltage	2N6489	-40	V
		2N6490	-60	
		2N6491	-80	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-15	A
I <sub>B</sub>	Base current		-5	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25°C	75	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance from junction to case	1.67	°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>CEO(SUS)</sub>	Collector-emitter sustaining voltage	2N6489	I <sub>C</sub> =-0.2A ; I <sub>B</sub> =0	-40		V		
		2N6490		-60				
		2N6491		-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> =-15A; I <sub>B</sub> =-5A			-3.5	V		
V <sub>BE-1</sub>	Base-emitter on voltage	I <sub>C</sub> =-5A ; V <sub>CE</sub> =-4V			-1.3	V		
V <sub>BE-2</sub>	Base-emitter on voltage	I <sub>C</sub> =-15A ; V <sub>CE</sub> =-4V			-3.5	V		
I <sub>CEX</sub>	Collector cut-off current V <sub>BE</sub> =-1.5V	2N6489	V <sub>CE</sub> =-45V; V <sub>CE</sub> =-40V; T <sub>C</sub> =150°C			-0.5 -5.0	mA	
		2N6490		V <sub>CE</sub> =-65V; V <sub>CE</sub> =-60V; T <sub>C</sub> =150°C				-0.5 -5.0
		2N6491		V <sub>CE</sub> =-85V; V <sub>CE</sub> =-80V; T <sub>C</sub> =150°C				-0.5 -5.0
I <sub>CEO</sub>	Collector cut-off current	2N6489	V <sub>CE</sub> =-20V; I <sub>B</sub> =0			-1.0	mA	
		2N6490		V <sub>CE</sub> =-30V; I <sub>B</sub> =0				
		2N6491		V <sub>CE</sub> =-40V; I <sub>B</sub> =0				
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> =-5A ; V <sub>CE</sub> =-4V	20		150			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-15A ; V <sub>CE</sub> =-4V	5					

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PACKAGE OUTLINE

