

Silicon NPN Power Transistors

2N6499

**DESCRIPTION**

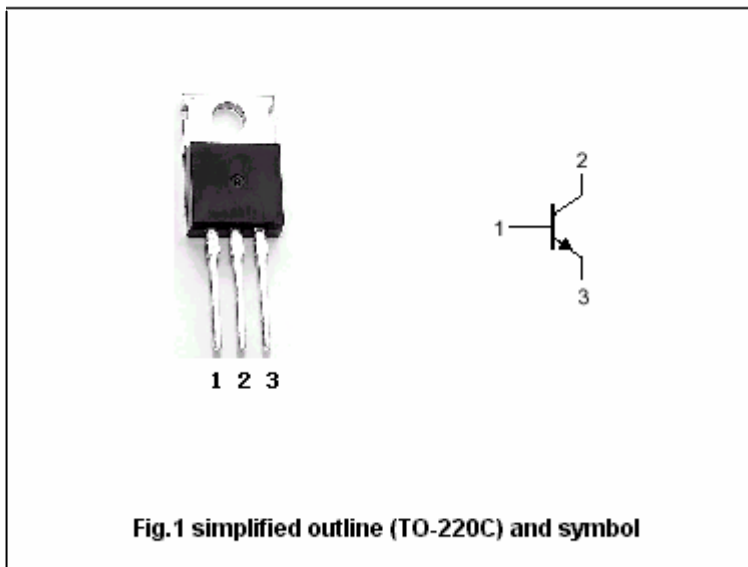
- With TO-220C package
- High breakdown voltage

**APPLICATIONS**

- Designed for high voltage inverters, switching regulators and line operated amplifier applications

**PINNING**

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



**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	450	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	350	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	6	V
I <sub>C</sub>	Collector current (DC)		5	A
I <sub>CM</sub>	Collector current-Peak		10	A
I <sub>B</sub>	Base current		2	A
P <sub>D</sub>	Total power dissipation	T <sub>C</sub> =25°C	80	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance from junction to case	1.56	°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>CE0(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =25mA ; I <sub>B</sub> =0	350			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =2.5A; I <sub>B</sub> =0.5A			1.5	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =2A			5.0	V
V <sub>BEsat-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =2.5A; I <sub>B</sub> =0.5A			1.5	V
V <sub>BEsat-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =2A			2.5	V
I <sub>CEX</sub>	Collector cut-off current	V <sub>CE</sub> =450V; V <sub>BE</sub> =-1.5V V <sub>CE</sub> =225V; V <sub>BE</sub> =-1.5V; T <sub>C</sub> =100 °C			1.0 10	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6V; I <sub>C</sub> =0			1.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =2.5A ; V <sub>CE</sub> =10V	10		75	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =5A ; V <sub>CE</sub> =10V	3			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =250mA ; V <sub>CE</sub> =10V; f=1MHz	5.0			

## Switching times

t <sub>r</sub>	Rise time	I <sub>C</sub> =2.5A, I <sub>B1</sub> =-I <sub>B2</sub> =0.5A V <sub>CC</sub> =125V			1.0	μs
t <sub>stg</sub>	Storage time				2.5	μs
t <sub>f</sub>	Fall time				1.0	μs

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PACKAGE OUTLINE



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