

## Silicon NPN Power Transistors

2SC2751

## DESCRIPTION

- With TO-3N package
- High voltage ,high speed

## APPLICATIONS

- For use in high voltage ,high speed and power switching applications

## PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

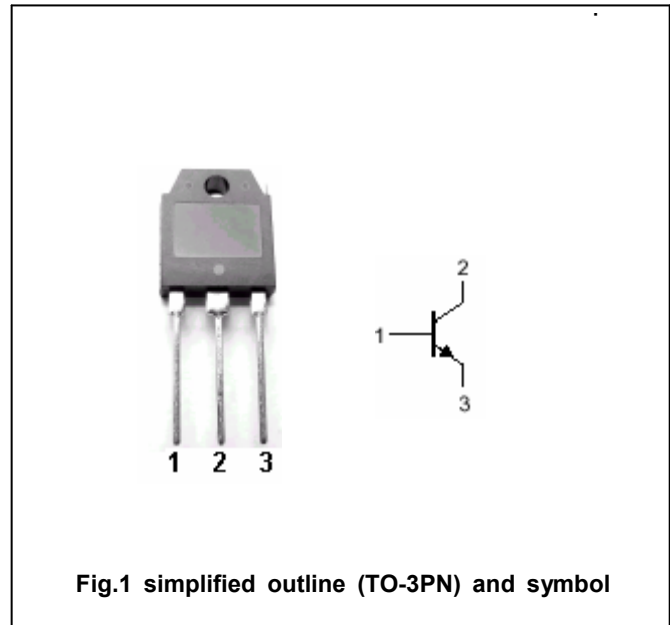


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	500	V
$V_{CEO}$	Collector-emitter voltage	Open base	400	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		15	A
$I_{CM}$	Collector current-peak		30	A
$I_B$	Base current		7.5	A
$P_C$	Collector power dissipation	$T_C=25^\circ\text{C}$	120	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

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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	I <sub>C</sub> =10A ; I <sub>B</sub> =2A; L=50μH	400			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A ; I <sub>B</sub> =2A			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =10A ; I <sub>B</sub> =2A			1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =400V; I <sub>E</sub> =0			100	μA
I <sub>CEX</sub>	Collector cut-off current	V <sub>CE</sub> =400V; V <sub>BE(off)</sub> =-1.5V T <sub>a</sub> =125°C			100 1.0	μA mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			10	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =2A ; V <sub>CE</sub> =5V	15		80	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =5A ; V <sub>CE</sub> =5V	10			
h <sub>FE-3</sub>	DC current gain	I <sub>C</sub> =10A ; V <sub>CE</sub> =5V	7			

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =10A; I <sub>B1</sub> =-I <sub>B2</sub> =2A R <sub>L</sub> =15Ω; V <sub>CC</sub> ≈150V			1.0	μs
t <sub>s</sub>	Storage time				2.5	μs
t <sub>f</sub>	Fall time				0.7	μs

◆ h<sub>FE-1</sub> Classifications

N	R	O	Y
15-30	20-40	30-60	40-80

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PACKAGE OUTLINE

