

## Silicon NPN Power Transistors

2SC2527

## DESCRIPTION

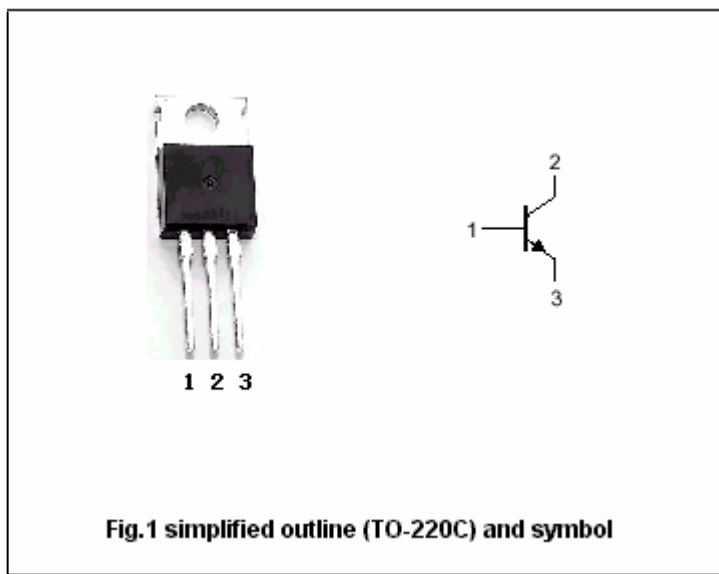
- With TO-220C package
- Complement to type 2SA1077
- Fast switching speed
- Excellent safe operating area

## APPLICATIONS

- High frequency power amplifiers
- Audio power amplifiers
- Switching regulators
- DC-DC converters

## PINNING

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

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	120	V
$V_{CEO}$	Collector-emitter voltage	Open base	120	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		10	A
$P_C$	Collector power dissipation	$T_C=25^\circ\text{C}$	60	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-65~150	$^\circ\text{C}$

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =1mA ; R <sub>BE</sub> =∞	120			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =50μA ; I <sub>E</sub> =0	120			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =50μA ; I <sub>C</sub> =0	7			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =0.5A			1.8	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =5 A ; V <sub>CE</sub> =5V			1.7	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =120V ; I <sub>E</sub> =0			50	μA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =120V; I <sub>B</sub> =0			1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =7V ; I <sub>C</sub> =0			50	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1 A ; V <sub>CE</sub> =5V	60		200	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =5 A ; V <sub>CE</sub> =5V	40			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1 A ; V <sub>CE</sub> =10V		80		MHz
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V; f=1MHz		180		pF

## Switching times

t <sub>r</sub>	Rise time	I <sub>C</sub> =7.5 A; R <sub>L</sub> =4Ω I <sub>B1</sub> =-I <sub>B2</sub> =0.75A		0.3		μs
t <sub>s</sub>	Storage time			1.3		μs
t <sub>f</sub>	Fall time			0.2		μs

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PACKAGE OUTLINE



Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)