

## Silicon NPN Power Transistors

2SD1739

## DESCRIPTION

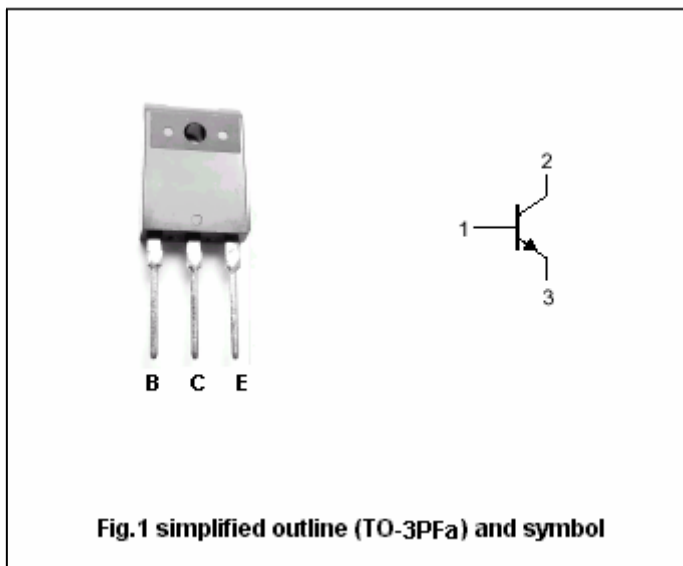
- With TO-3PFa package
- Wide area of safe operation
- High voltage, high speed

## APPLICATIONS

- Horizontal deflection output applications

## PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	1500	V
$V_{CEO}$	Collector-emitter voltage	Open base	700	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		6	A
$I_{CM}$	Collector current-peak		18	A
$I_B$	Base current		2.5	A
$P_C$	Collector power dissipation	$T_C=25^{\circ}\text{C}$	100	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>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =1.2A			8.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =1.2A			1.5	V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1mA ; I <sub>C</sub> =0	7			V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =750V ; I <sub>E</sub> =0			10	μ A
		V <sub>CB</sub> =1500V ; I <sub>E</sub> =0			1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V ; I <sub>C</sub> =0			10	μ A
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	6		30	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A ; V <sub>CE</sub> =10V		2		MHz

## Switching times

t <sub>stg</sub>	Storage time	I <sub>C</sub> =5A ; I <sub>B1</sub> =1A I <sub>B2</sub> =-2A ; V <sub>CC</sub> =200V		1.5		μ s
t <sub>f</sub>	Fall time			0.2		μ s

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PACKAGE OUTLINE



Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.30\text{mm}$ )