

Silicon NPN Power Transistors

2SD844

DESCRIPTION

- With TO-3P(I) package
- Complement to type 2SB754
- High collector current : $I_C=7A$
- Low collector saturation voltage
- High power dissipation

APPLICATIONS

- High current switching applications
- Power amplifier applications

PINNING

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

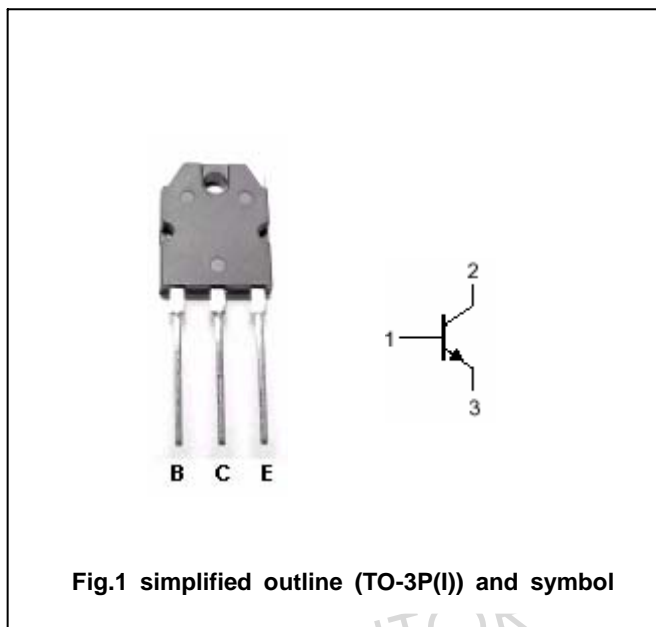


Fig.1 simplified outline (TO-3P(I)) and symbol

Absolute maximum ratings( $T_a=25$  )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	50	V
$V_{CEO}$	Collector-emitter voltage	Open base	50	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		7	A
$I_E$	Emitter current		-7	A
$P_C$	Collector power dissipation	$T_a=25$	2.5	W
		$T_C=25$	60	
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =50mA ; I <sub>B</sub> =0	50			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =10mA; I <sub>C</sub> =0	5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4.0A; I <sub>B</sub> =0.4A			0.4	V
V <sub>BE</sub>	Base-emitter voltage	I <sub>C</sub> =4A ; V <sub>CE</sub> =1V			1.2	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =50V; I <sub>E</sub> =0			10	μA
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> =1A ; V <sub>CE</sub> =1V	70		240	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =4A ; V <sub>CE</sub> =1V	30			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V		15		MHz
C <sub>OB</sub>	Collector output capacitance	f=1MHz ; V <sub>CB</sub> =10V		250		pF

◆ h<sub>FE-1</sub> Classifications

O	Y
70-140	120-240

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PACKAGE OUTLINE

