

## Silicon NPN Power Transistors

2SD847

## DESCRIPTION

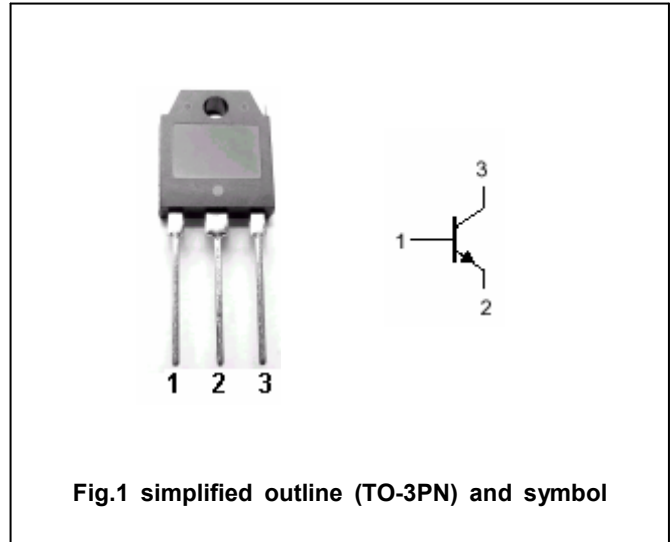
- With TO-3PN package
- High collector current
- Wide area of safe operation
- Complement to type 2SB757

## APPLICATIONS

- Audio amplifications
- Serie regulators
- General purpose power amplifiers

## PINNING

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

ABSOLUTE MAXIMUM RATINGS( $T_c=25^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	40	V
$V_{CEO}$	Collector-emitter voltage	Open base	40	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		15	A
$I_B$	Base current		5	A
$P_C$	Collector power dissipation	$T_c=25^\circ\text{C}$	80	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	1.56	$^\circ\text{C}/\text{W}$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =0.1mA; I <sub>E</sub> =0	40			V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =10mA; I <sub>B</sub> =0	40			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =0.1mA; I <sub>C</sub> =0	5			V
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =0.5A			0.8	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =0.5A			1.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =40V; 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			100	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =5A ; V <sub>CE</sub> =2V	40		240	

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =15A; I <sub>B1</sub> =-I <sub>B2</sub> =1.5A R <sub>L</sub> =2Ω; P <sub>W</sub> =20μs, Duty≤2%			1.0	μs
t <sub>s</sub>	Storage time				2.0	μs
t <sub>f</sub>	Fall time				1.0	μs

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PACKAGE OUTLINE

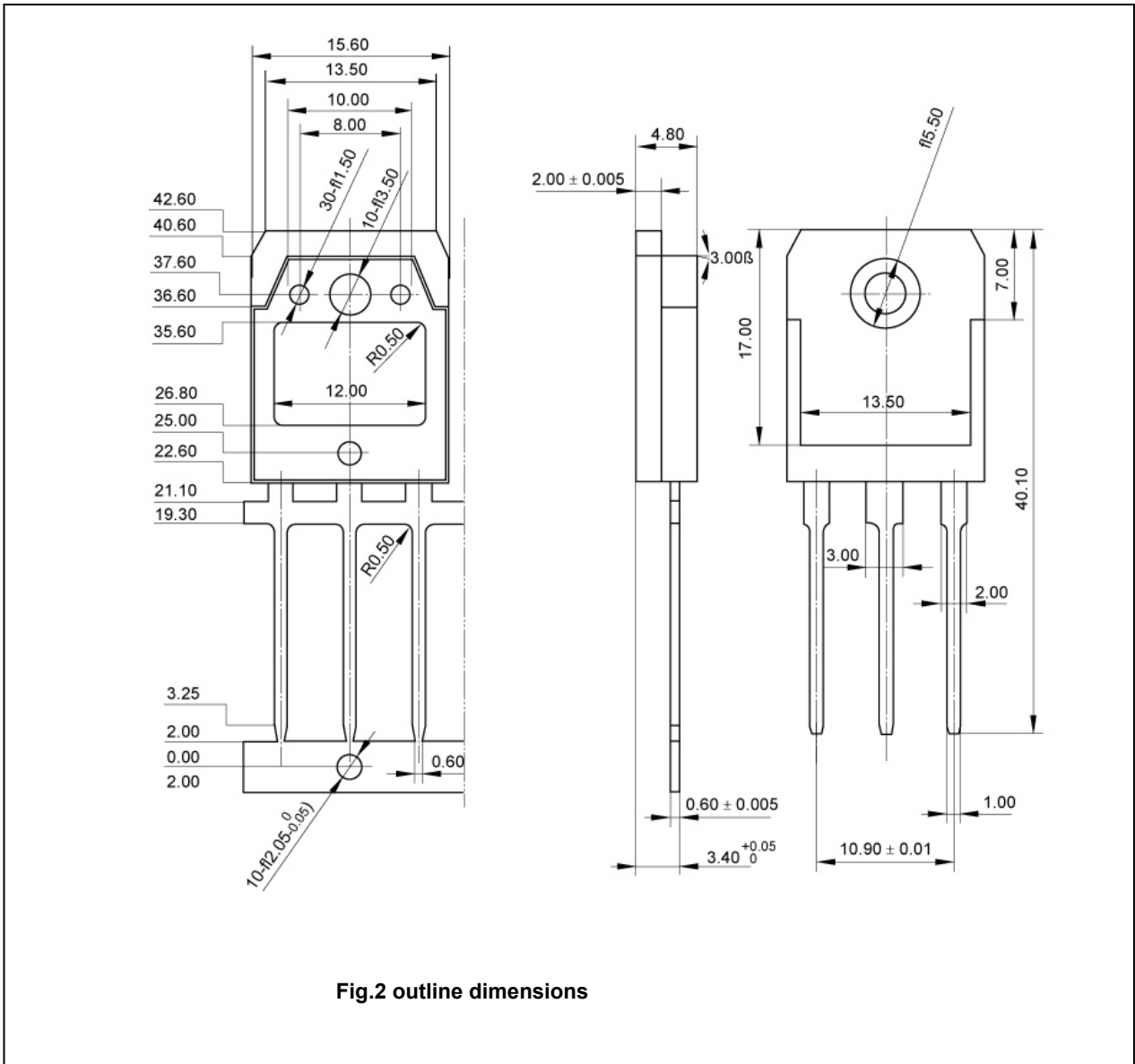


Fig.2 outline dimensions