

## Silicon NPN Power Transistors

## 2N6383 2N6384 2N6385

## DESCRIPTION

- With TO-3 package
- Complement to type 2N6648/6649/6650
- DARLINGTON
- High DC current gain

## APPLICATIONS

- Designed for low and medium frequency power application such as power switching audio amplifier ,hammer drivers and shunt and series regulators

## PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

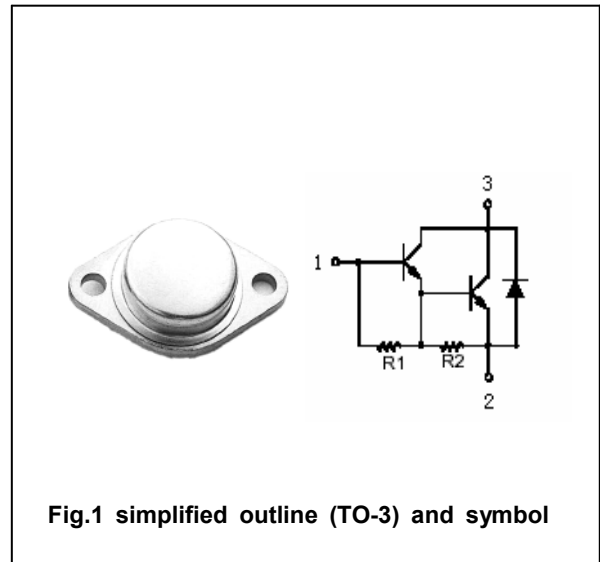


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings( $T_a = \square$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2N6383	40	V
		2N6384	60	
		2N6385	80	
$V_{CEO}$	Collector-emitter voltage	2N6383	40	V
		2N6384	60	
		2N6385	80	
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		10	A
$I_{CM}$	Collector current-peak		15	A
$I_B$	Base current		0.25	A
$P_D$	Total Power Dissipation	$T_C = 25 \square$	100	W
$T_j$	Junction temperature		200	$\square$
$T_{stg}$	Storage temperature		-65~200	$\square$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.75	$\square/W$

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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	2N6383	40			V
		2N6384	60			
		2N6385	80			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =10mA			2.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =100mA			3.0	V
V <sub>BE-1</sub>	Base-emitter on voltage	I <sub>C</sub> =5A; V <sub>CE</sub> =3V			2.8	V
V <sub>BE-2</sub>	Base-emitter on voltage	I <sub>C</sub> =10A; V <sub>CE</sub> =3V			4.5	V
I <sub>CEO</sub>	Collector cut-off current	2N6383			1.0	mA
		2N6384				
		2N6385				
I <sub>CEx</sub>	Collector cut-off current	2N6383			0.3 3.0	mA
		2N6384			0.3 3.0	
		2N6385			0.3 3.0	
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			10	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =5A; V <sub>CE</sub> =3V	1000		20000	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =10A; V <sub>CE</sub> =3V	100			
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =10V; f=1MHz			200	pF

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PACKAGE OUTLINE

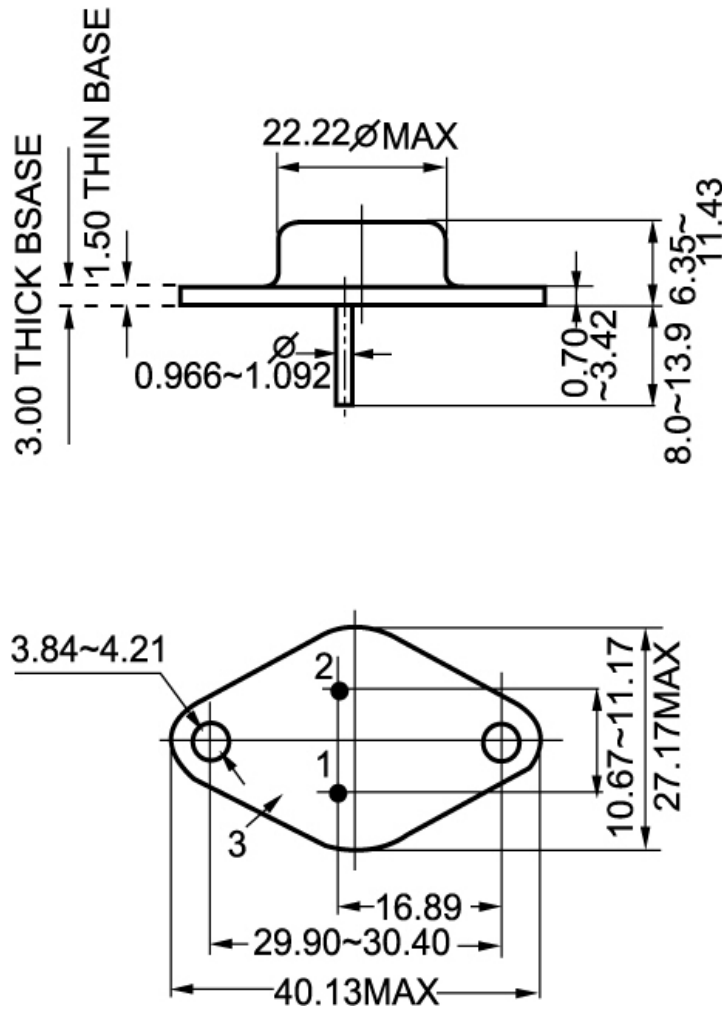


Fig.2 outline dimensions (unindicated tolerance:±0.10mm)