

## Silicon NPN Power Transistors

## 2N6576 2N6577 2N6578

## DESCRIPTION

- With TO-3 package
- DARLINGTON
- High DC current gain

## APPLICATIONS

- Power switching
- Audio amplifiers
- Hammer drivers
- Series and shunt regulators

## PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

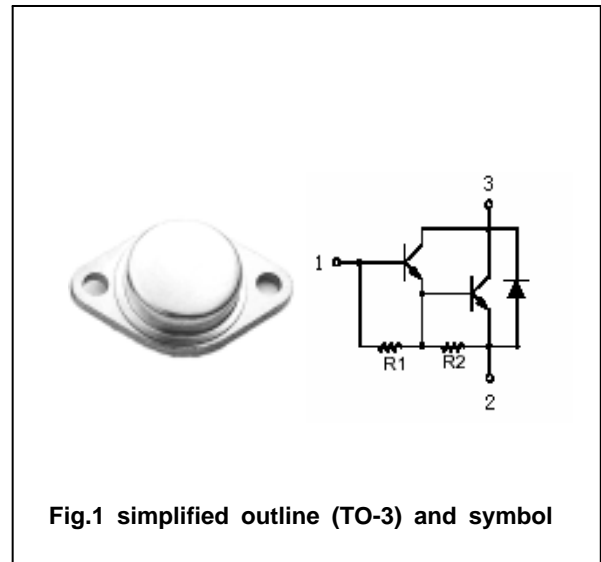


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings( $T_a =$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2N6576	60	V
		2N6577	90	
		2N6578	120	
$V_{CEO}$	Collector-emitter voltage	2N6576	60	V
		2N6577	90	
		2N6578	120	
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		15	A
$I_{CM}$	Collector current-peak		30	A
$I_B$	Base current		0.25	A
$P_D$	Total Power Dissipation	$T_C=25$	120	W
$T_j$	Junction temperature		200	
$T_{stg}$	Storage temperature		-65~200	

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEQ(SUS)</sub>	Collector-emitter sustaining voltage	2N6576	I <sub>C</sub> =0.2A ; I <sub>B</sub> =0			V
		2N6577				
		2N6578				
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =100mA			2.8	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =15A ; I <sub>B</sub> =150mA			4.0	V
V <sub>BE sat-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =100mA			3.5	V
V <sub>BE sat-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =15A ; I <sub>B</sub> =150mA			4.5	V
I <sub>CEO</sub>	Collector cut-off current	2N6576			1.0	mA
		2N6577				
		2N6578				
I <sub>CBO</sub>	Collector cut-off current	2N6576			0.5	mA
		2N6577				
		2N6578				
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =7V; I <sub>C</sub> =0			7.5	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.4A ; V <sub>CE</sub> =3V	200			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =4A ; V <sub>CE</sub> =3V	2000		20000	
h <sub>FE-3</sub>	DC current gain	I <sub>C</sub> =10A ; V <sub>CE</sub> =3V	500		5000	
h <sub>FE-4</sub>	DC current gain	I <sub>C</sub> =15A ; V <sub>CE</sub> =4V	100			
V <sub>F</sub>	Diode forward voltage	I <sub>F</sub> =15A			4.5	A

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	1.46	/W

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PACKAGE OUTLINE

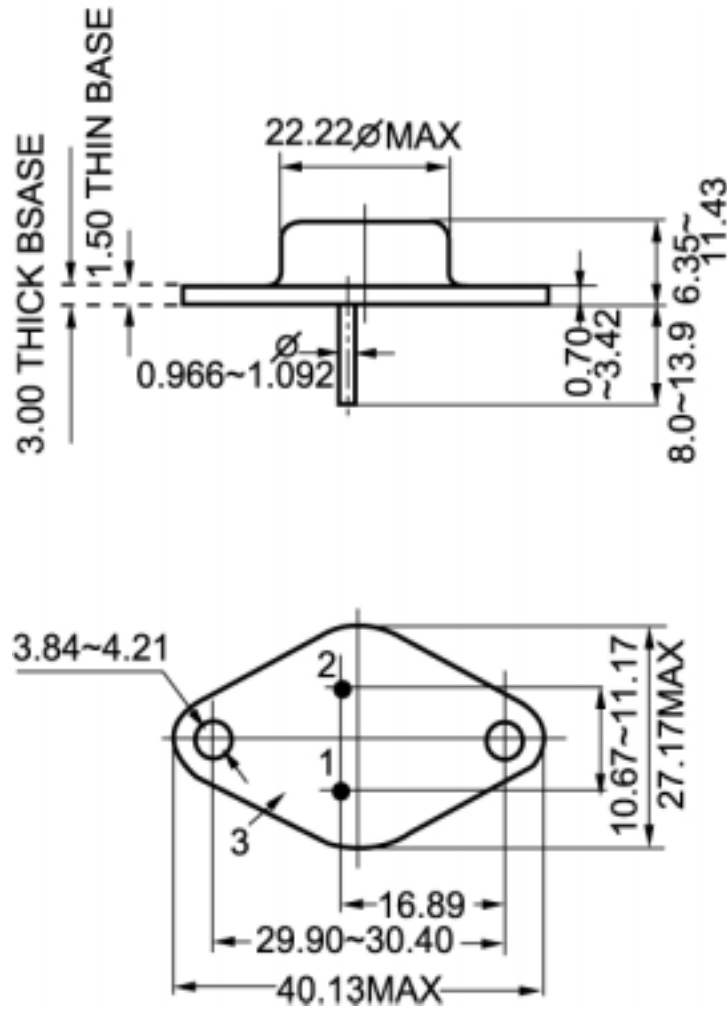


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.10\text{mm}$ )