

**Inchange Semiconductor**

**Product Specification**

**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

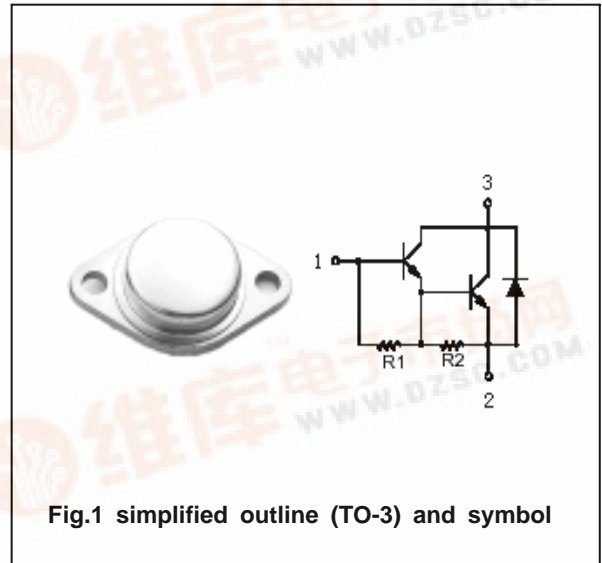


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta= )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2N6576	60	V
		2N6577	90	
		2N6578	120	
V <sub>CEO</sub>	Collector-emitter voltage	2N6576	60	V
		2N6577	90	
		2N6578	120	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	7	V
I <sub>C</sub>	Collector current		15	A
I <sub>CM</sub>	Collector current-peak		30	A
I <sub>B</sub>	Base current		0.25	A
P <sub>D</sub>	Total Power Dissipation	T <sub>C</sub> =25	120	W
T <sub>j</sub>	Junction temperature		200	
T <sub>stg</sub>	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>CEO(SUS)</sub>	Collector-emitter sustaining voltage	2N6576	60			V	
		2N6577	90				
		2N6578	120				
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	V <sub>CE</sub> =60V; I <sub>B</sub> =0			1.0	mA
		2N6577	V <sub>CE</sub> =90V; I <sub>B</sub> =0				
		2N6578	V <sub>CE</sub> =120V; I <sub>B</sub> =0				
I <sub>CBO</sub>	Collector cut-off current	2N6576	V <sub>CB</sub> =60V; I <sub>E</sub> =0			0.5	mA
		2N6577	V <sub>CB</sub> =90V; I <sub>E</sub> =0				
		2N6578	V <sub>CB</sub> =120V; I <sub>E</sub> =0				
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

