

**Silicon PNP Power Transistors**

**2N6296 2N6297**

**DESCRIPTION**

- With TO-66 package
- DARLINGTON
- Complement to type 2N6294/6295

**APPLICATIONS**

- For high gain amplifier and medium speed switching applications

**PINNING (See Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

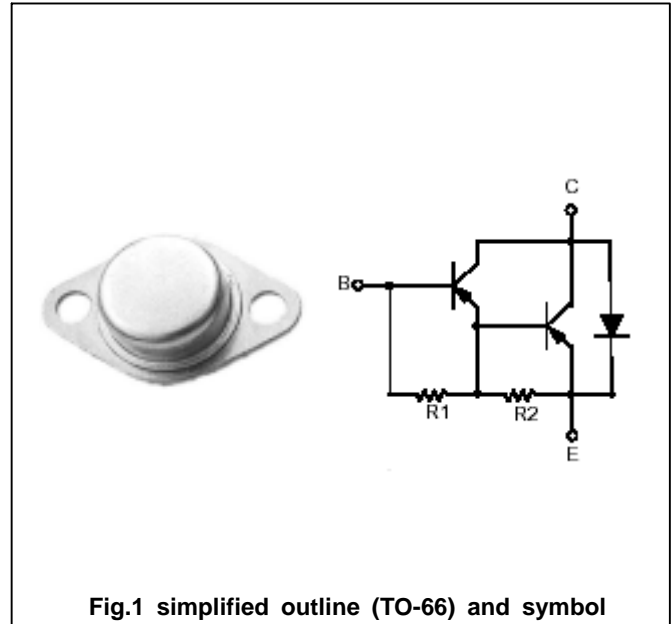


Fig.1 simplified outline (TO-66) and symbol

**Absolute maximum ratings(Ta=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2N6296	60	V
		2N6297	80	
V <sub>CEO</sub>	Collector-emitter voltage	2N6296	60	V
		2N6298	80	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		4	A
I <sub>CM</sub>	Collector current-Peak		8	A
I <sub>B</sub>	Base current		80	mA
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25	50	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-65~200	

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance from junction to case	3.5	/W

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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	2N6296	I <sub>C</sub> =50mA ; I <sub>B</sub> =0	60			V
		2N6297		80			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =2A ; I <sub>B</sub> =8mA			2.0	V	
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4A ; I <sub>B</sub> =40mA			3.0	V	
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =4A ; I <sub>B</sub> =40mA			4.0	V	
V <sub>BE</sub>	Base -emitter on voltage	I <sub>C</sub> =2A ; V <sub>CE</sub> =3V			2.8	V	
I <sub>CEx</sub>	Collector cut-off current	V <sub>CE</sub> =RatedV <sub>CE</sub> ; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =150			0.5 5.0	mA	
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =1/2Rated V <sub>CE0</sub> ; I <sub>B</sub> =0			0.5	mA	
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			2.0	mA	
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =2A ; V <sub>CE</sub> =3V	750		18000		
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =4A ; V <sub>CE</sub> =3V	100				
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1.5A ; V <sub>CE</sub> =3V; f=1.0MHz	4.0			MHz	
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V; f=0.1MHz			200	pF	

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PACKAGE OUTLINE

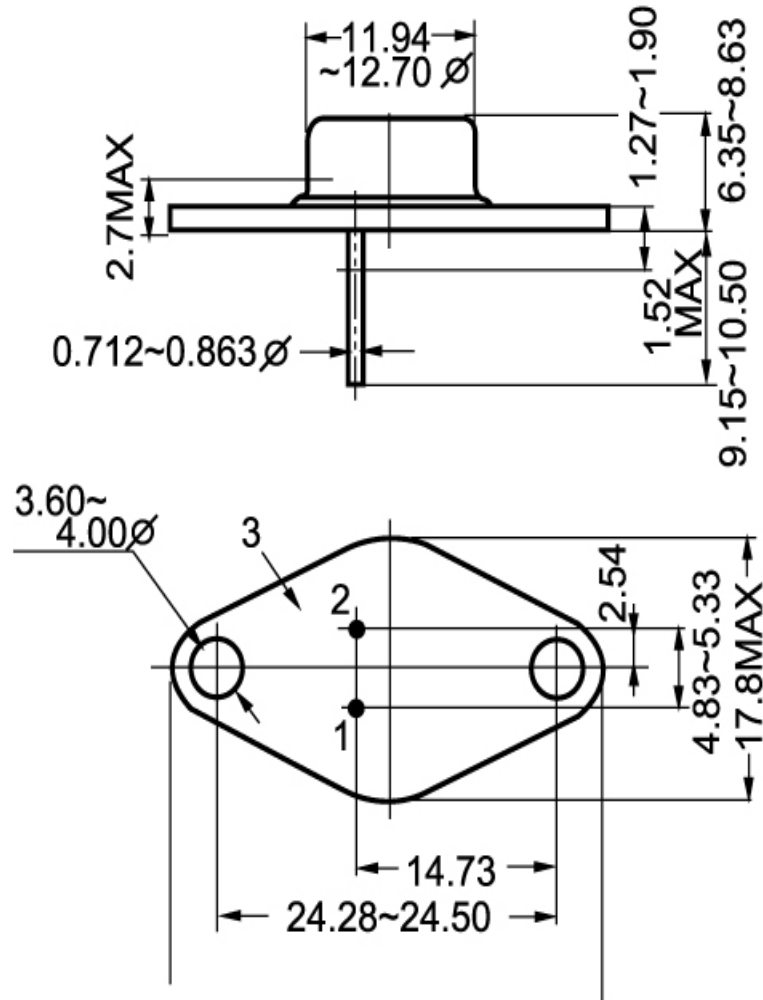


Fig.2 Outline dimensions