

**Silicon PNP Power Transistors**

**2N5743 2N5744**

**DESCRIPTION**

- With TO-66 package
- Low collector saturation voltage
- Fast switching speed

**APPLICATIONS**

- For general-purpose switching and power amplifier applications.

**PINNING**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

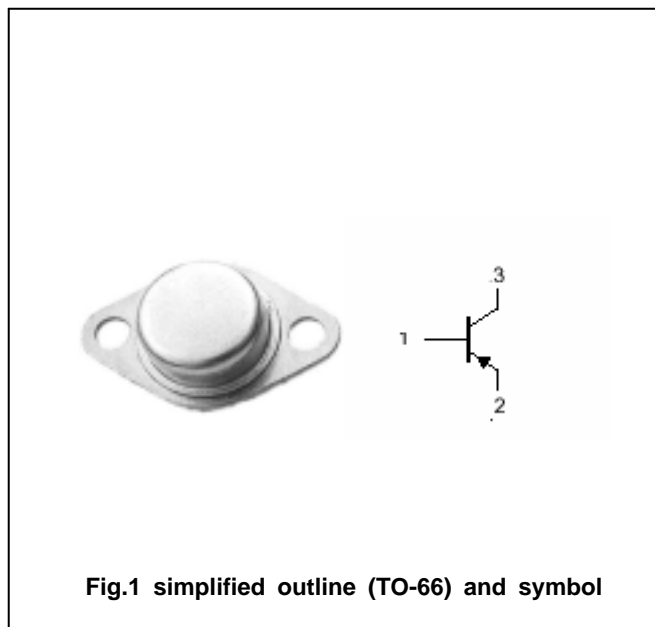


Fig.1 simplified outline (TO-66) and symbol

I

**Absolute maximum ratings(Ta= )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT	
V <sub>CBO</sub>	Collector-base voltage	Open emitter	2N5743	-60	V
			2N5744	-100	
V <sub>CEO</sub>	Collector-emitter voltage	Open base	2N5743	-60	V
			2N5744	-100	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V	
I <sub>C</sub>	Collector current		-20	A	
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =100	25	W	
T <sub>j</sub>	Junction temperature		150		
T <sub>stg</sub>	Storage temperature		-65~200		

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	0.875	/W

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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	2N5743	I <sub>C</sub> =-0.2A ; I <sub>B</sub> =0	-60			V
		2N5744		-100			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-10A ; I <sub>B</sub> =-1A			-1.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-20A ; I <sub>B</sub> =-4A			-3.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage		I <sub>C</sub> =-10A ; I <sub>B</sub> =-1A			-1.8	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =-10A ; V <sub>CE</sub> =-5V			-1.5	V
I <sub>CBO</sub>	Collector cut-off current		V <sub>CB</sub> =Rated V <sub>CBO</sub> ; I <sub>E</sub> =0			-0.1	mA
I <sub>CEx</sub>	Collector cut-off current		V <sub>CE</sub> = Rated V <sub>CEO</sub> ; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =150			-0.5 -5.0	mA
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =-5V ; I <sub>C</sub> =0			-1.0	mA
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =-10A ; V <sub>CE</sub> =-5V	20		80	
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =-20A ; V <sub>CE</sub> =-5V	10			
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =-1A ; V <sub>CE</sub> =-10V	10			MHz

PACKAGE OUTLINE

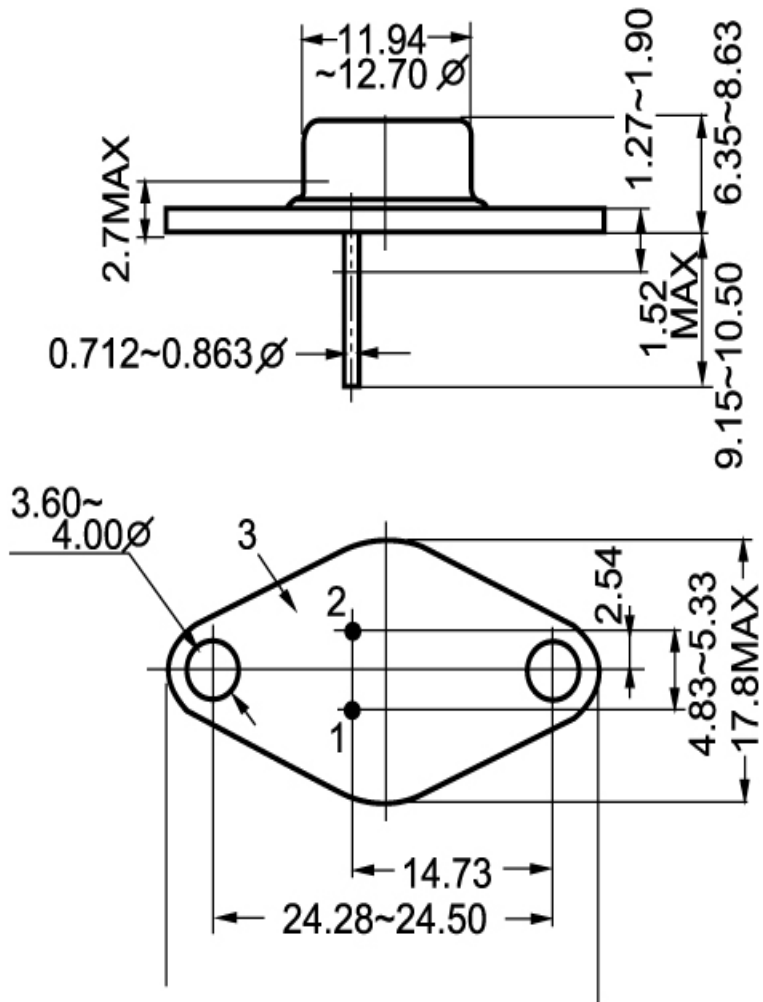


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.1\text{mm}$ )