

**Silicon PNP Power Transistors**

**2N5741 2N5742**

**DESCRIPTION**

- With TO-3 package
- Low collector-emitter saturation voltage
- Fast switching speed

**APPLICATIONS**

- For general-purpose switching and power amplifier applications.

**PINNING**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

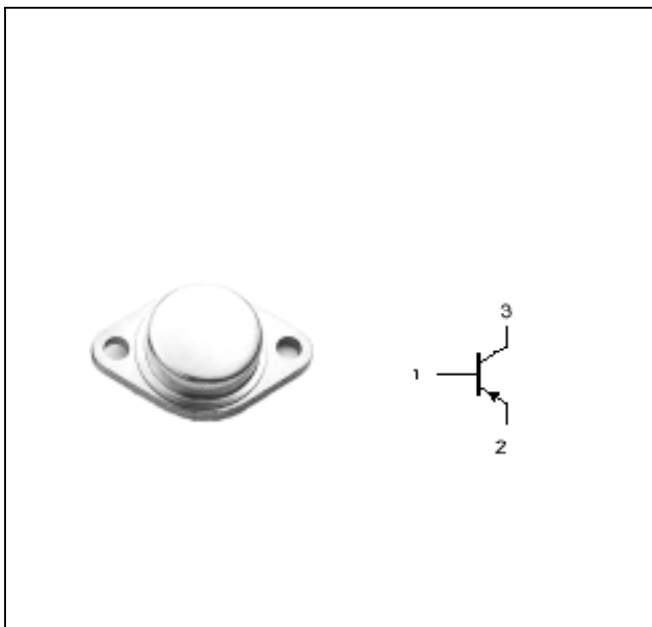


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta= )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CB0</sub>	Collector-base voltage	2N5741	60	V
		2N5742		
V <sub>CEO</sub>	Collector-emitter voltage	2N5741	60	V
		2N5742		
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	65	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</sub>	Collector-emitter sustaining voltage	2N5741	I <sub>C</sub> =0.2A ; I <sub>B</sub> =0	60			V
		2N5742		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>CB0</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	

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PACKAGE OUTLINE

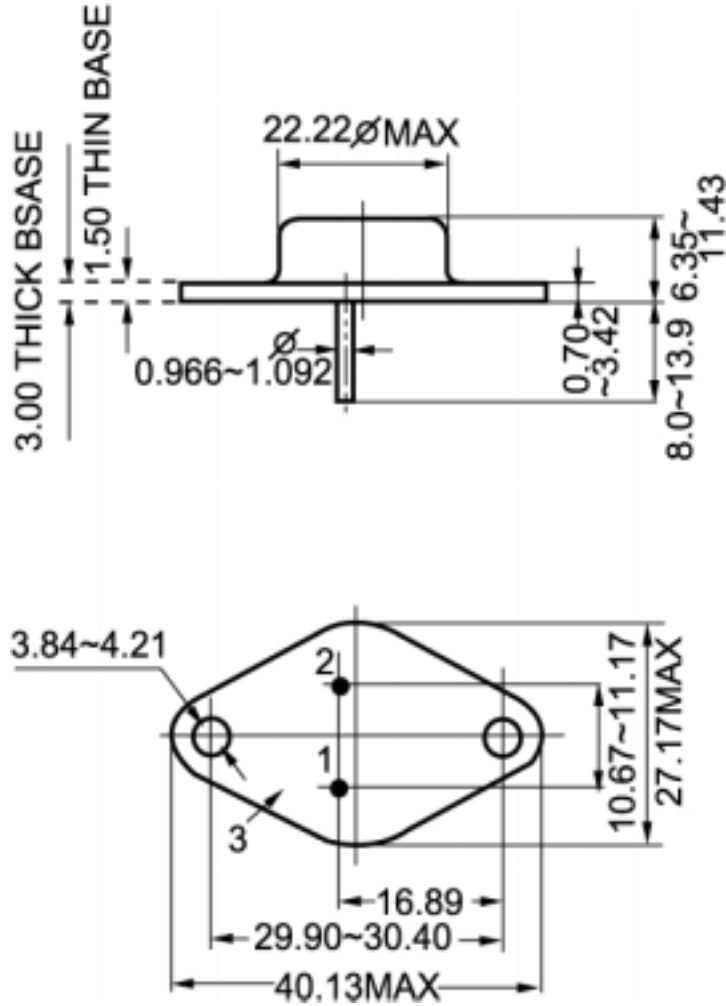


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.1$ mm)