

## Silicon PNP Power Transistors

## 2SA744/745/745A

**DESCRIPTION**

- With TO-3 package
- Complement to type 2SC1402/1403/1403A

**APPLICATIONS**

- For power switching and general purpose applications

**PINNING(see Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

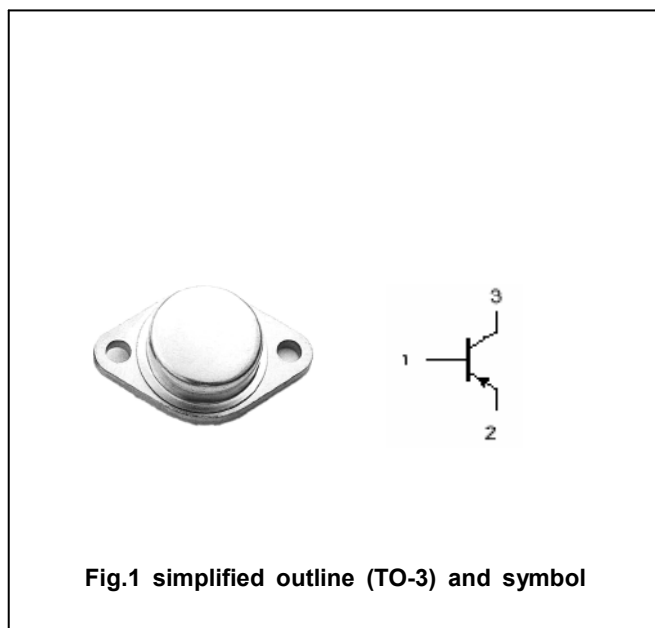


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta=□)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2SA744	-80	V
		2SA745	-100	
		2SA745A	-120	
V <sub>CEO</sub>	Collector-emitter voltage	2SA744	-80	V
		2SA745	-100	
		2SA745A	-120	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-6	V
I <sub>C</sub>	Collector current		-8	A
I <sub>B</sub>	Base current		-3	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25□	70	W
T <sub>j</sub>	Junction temperature		150	□
T <sub>stg</sub>	Storage temperature		-65~150	□

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	2SA744	-80			V	
		2SA745	-100				
		2SA745A	-120				
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-3A; I <sub>B</sub> =-0.3A			-1.5	V	
I <sub>CBO</sub>	Collector cut-off current	2SA744	V <sub>CB</sub> =-80V; I <sub>E</sub> =0			-1.0	mA
		2SA745	V <sub>CB</sub> =-100V; I <sub>E</sub> =0				
		2SA745A	V <sub>CB</sub> =-120V; I <sub>E</sub> =0				
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-6V; I <sub>C</sub> =0			-1.0	mA	
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-3A; V <sub>CE</sub> =-4V	30				
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A; V <sub>CE</sub> =-12V		15		MHz	

## Switching times

t <sub>r</sub>	Rise time	I <sub>C</sub> =-3A; R <sub>L</sub> =4Ω I <sub>B1</sub> =-0.2A; I <sub>B2</sub> =0.1A V <sub>CC</sub> =-12V		1.2		μs
t <sub>s</sub>	Storage time			2.0		μs
t <sub>f</sub>	Fall time			0.55		μs

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PACKAGE OUTLINE



Fig.2 outline dimensions (unindicated tolerance:±0.1mm)