

Silicon NPN Power Transistors

2SD743 2SD743A

DESCRIPTION

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- With TO-220C package
- Complement to type 2SB703/703A

APPLICATIONS

- Designed for use in audio frequency power amplifier ,low speed switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

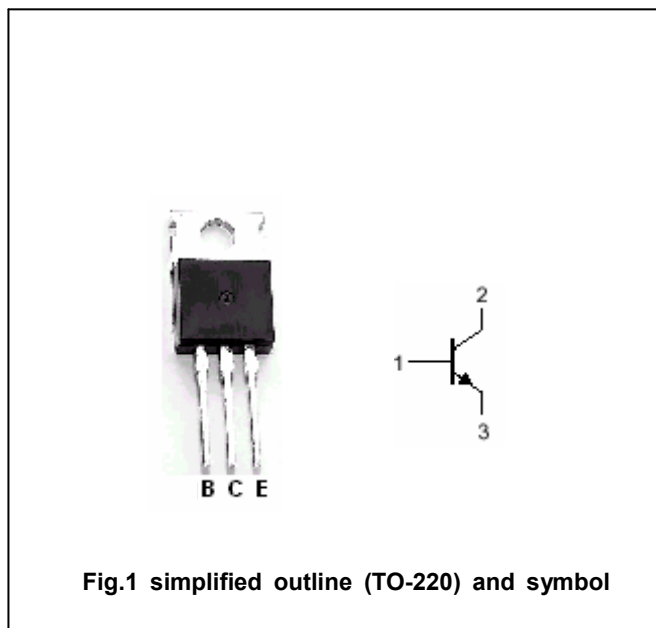


Fig.1 simplified outline (TO-220) and symbol

Maximum absolute ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	100	V
V <sub>CEO</sub>	Collector-emitter voltage	2SD743	80	V
		2SD743A	100	
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		6	A
I <sub>B</sub>	Base current		1	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	40	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-50~150	°C

THERMAL CHARACTERISTICS

SYMBOL	CHARACTERISTICS	MAX	UNIT
Rθ <sub>jc</sub>	Thermal resistance junction to case	3.125	°C/W

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## CHARACTERISTICS

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

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	2SD743	I <sub>C</sub> =10mA; I <sub>B</sub> =0	80		V
		2SD743A		100		
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =1.0mA; I <sub>E</sub> =0	100			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1.0mA; I <sub>C</sub> =0	5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =3A; I <sub>B</sub> =0.3A			2.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =3A; I <sub>B</sub> =0.3A			2.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =80V; I <sub>E</sub> =0			10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =3V; I <sub>C</sub> =0			10	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =20mA; V <sub>CE</sub> =5V	20			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =0.5A; V <sub>CE</sub> =5V	40		200	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.1A; V <sub>CE</sub> =5V; f=1.0MHz	10			MHz

◆ h<sub>FE-2</sub> Classifications

S	R	Q
40-80	60-120	100-200

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PACKAGE OUTLINE

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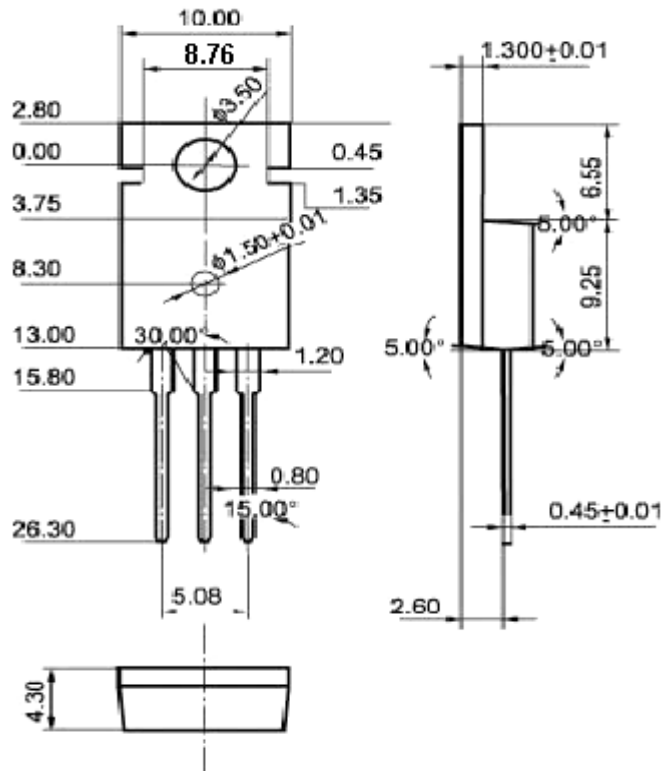


Fig.2 Outline dimensions (unindicated tolerance:±0.10mm)