

Silicon NPN Power Transistors

2SD743 2SD743A

DESCRIPTION

- 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

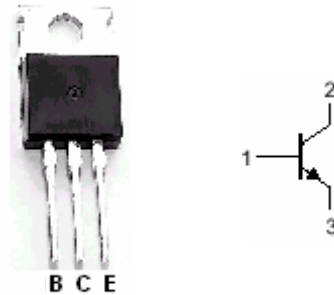


Fig.1 simplified outline (TO-220) and symbol

Maximum absolute ratings(Ta=25℃)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage		Open emitter	100	V
V_{CEO}	Collector-emitter voltage	2SD743	Open base	80	V
		2SD743A		100	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current			4	A
I_{CM}	Collector current-Peak			6	A
I_B	Base current			1	A
P_C	Collector power dissipation		$T_C=25^\circ\text{C}$	40	W
T_j	Junction temperature			150	℃
T_{stg}	Storage temperature			-50~150	℃

THERMAL CHARACTERISTICS

SYMBOL	CHARACTERISTICS	MAX	UNIT
$R_{\theta jc}$	Thermal resistance junction to case	3.125	℃/W

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CHARACTERISTICS

T_j=25℃ unless otherwise specified

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

◆ h_{FE-2} Classifications

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

