

Silicon NPN Power Transistors

2SD745/745A/745B

DESCRIPTION

- With MT-200 package
- Complement to type 2SB705/705A/705B

APPLICATIONS

- Audio frequency power amplifier
- Suitable for output stages of 60~120W audio amplifiers and voltage regulators

PINNING(see Fig.2)

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

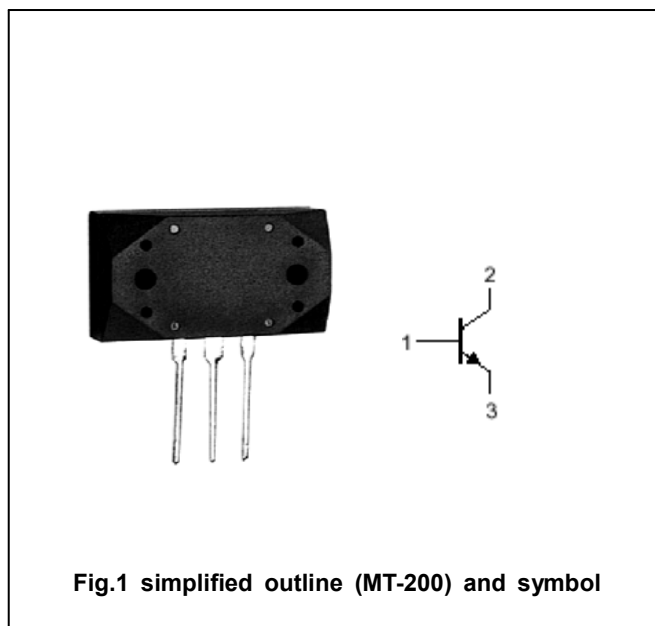


Fig.1 simplified outline (MT-200) and symbol

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SD745	Open emitter	140	V
		2SD745A		150	
		2SD745B		160	
V_{CEO}	Collector-emitter voltage	2SD745	Open base	140	V
		2SD745A		150	
		2SD745B		160	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current			10	A
I_{CM}	Collector current-peak			15	A
P_T	Total power dissipation		$T_C=25^\circ\text{C}$	120	W
T_j	Junction temperature			150	$^\circ\text{C}$
T_{stg}	Storage temperature			-55~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

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SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SD745	$I_C=25mA; I_B=0$	140			V
		2SD745A		150			
		2SD745B		160			
V_{CEsat}	Collector-emitter saturation voltage		$I_C=5A; I_B=0.5A$			1.5	V
V_{BEsat}	Base-emitter saturation voltage		$I_C=5A; I_B=0.5A$			2.0	V
I_{CBO}	Collector cut-off current		$V_{CB}=140V; I_E=0$			50	μA
I_{EBO}	Emitter cut-off current		$V_{EB}=3V; I_C=0$			50	μA
h_{FE-1}	DC current gain		$I_C=50mA; V_{CE}=5V$	20			
h_{FE-2}	DC current gain		$I_C=2A; V_{CE}=5V$	40		200	
f_T	Transition frequency		$I_C=0.2A; V_{CE}=5V$		15		MHz
C_{OB}	Output capacitance		$I_E=0; V_{CB}=10V; f=1MHz$		270		pF

◆ h_{FE-2} classifications

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

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PACKAGE OUTLINE

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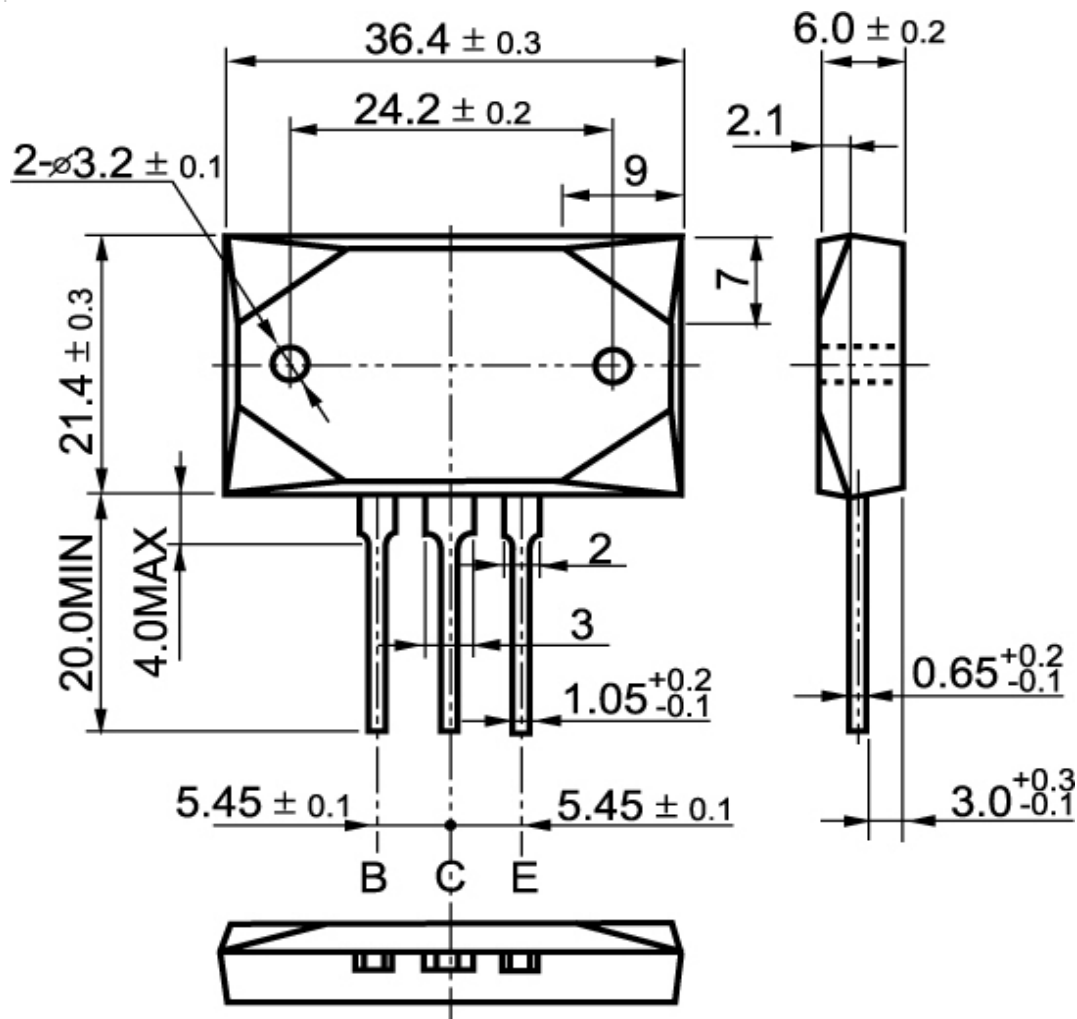


Fig.2 Outline dimensions