

Silicon NPN Power Transistors

2SD1772 2SD1772A

DESCRIPTION

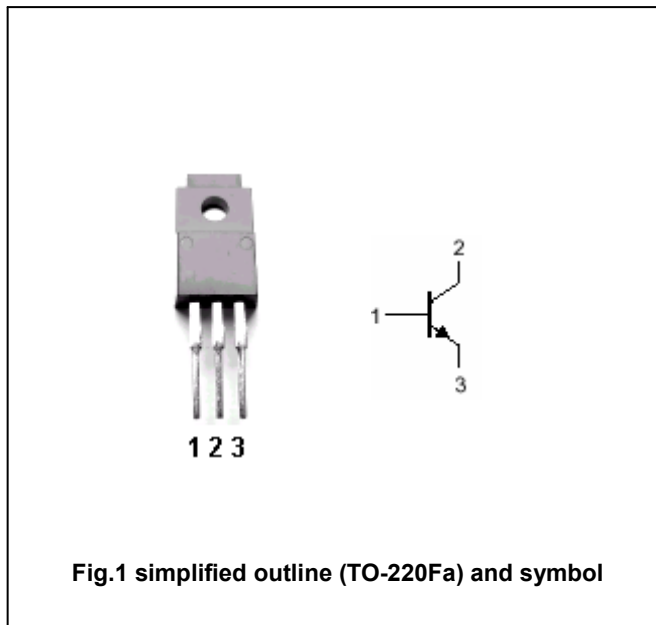
- With TO-220Fa package
- Complement to type 2SB1192/1192A
- Large collector power dissipation

APPLICATIONS

- For power amplification
- For TV vertical deflection output

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	200	V
V <sub>CEO</sub>	Collector-emitter voltage	2SD1772	150	V
		2SD1772A	180	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	6	V
I <sub>C</sub>	Collector current (DC)		1	A
I <sub>CM</sub>	Collector current-peak		2	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	25	W
		T <sub>a</sub> =25°C	2	
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°C

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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	2SD1772	I <sub>C</sub> =5mA, I <sub>B</sub> =0	150			V
		2SD1772A		180			
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =0.5mA, I <sub>C</sub> =0	6			V	
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =500mA; I <sub>B</sub> =50mA			1.0	V	
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =300mA; V <sub>CE</sub> =10V			1.0	V	
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =200V; I <sub>E</sub> =0			50	μA	
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =4V; I <sub>C</sub> =0			50	μA	
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =100mA; V <sub>CE</sub> =10V	60		240		
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =300mA; V <sub>CE</sub> =10V	50				
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =10V; f=1MHz		27		pF	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =100mA; V <sub>CE</sub> =10V; f=1MHz		20		MHz	

◆ h<sub>FE-1</sub> Classifications

Q	P
60-140	100-240

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PACKAGE OUTLINE

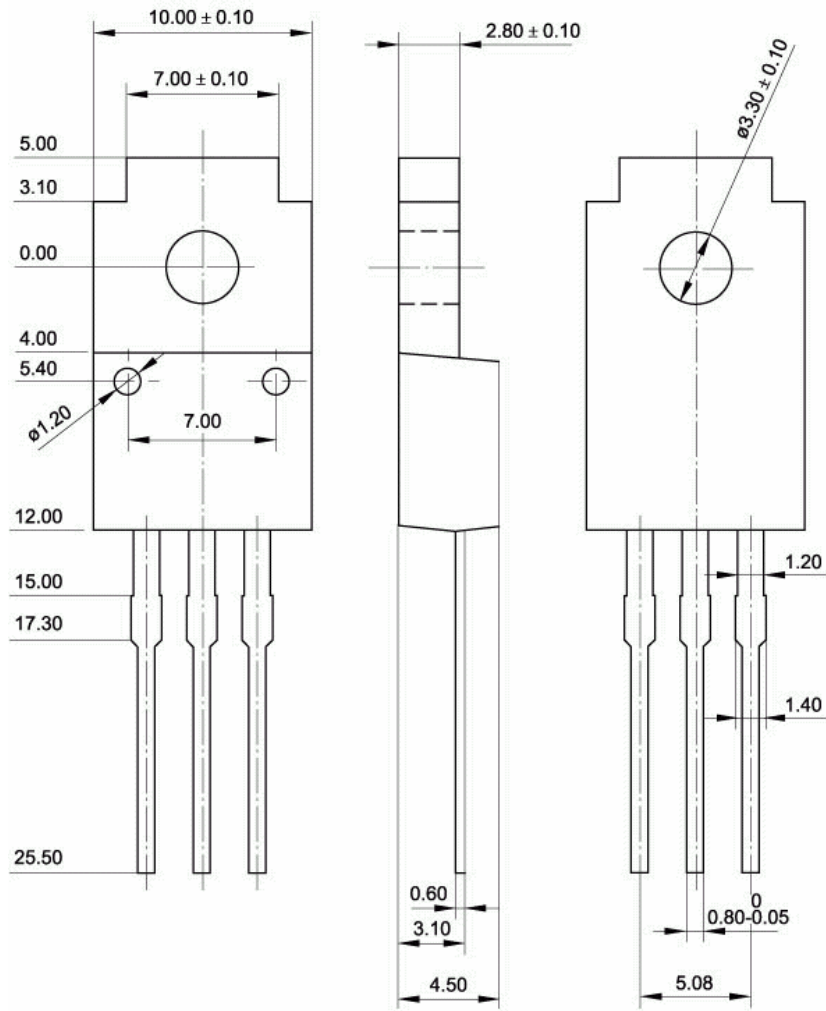


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.15$  mm)

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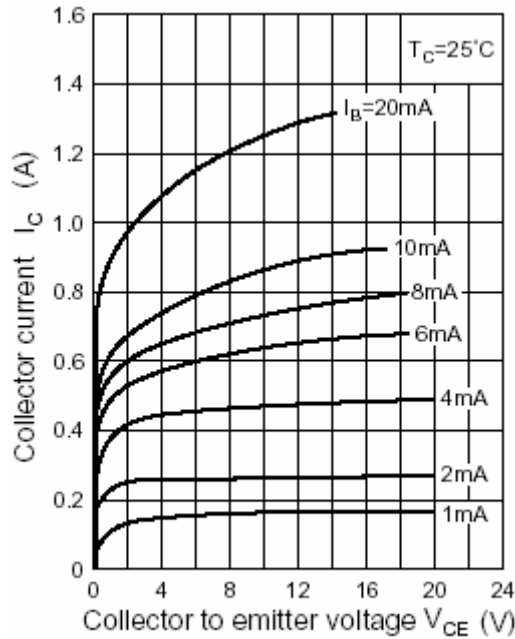


Fig.3 Static Characteristic

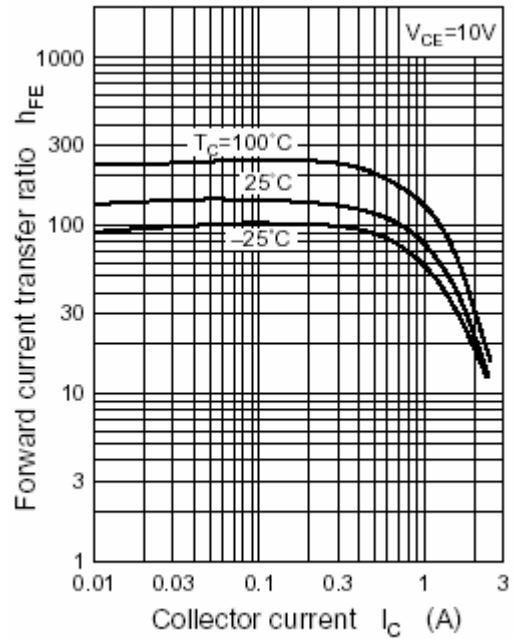


Fig.4 DC current Gain

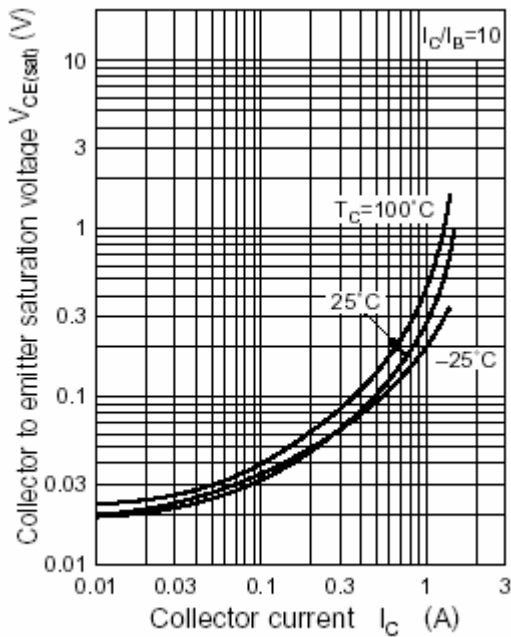


Fig.5 Collector-Emitter Saturation Voltage

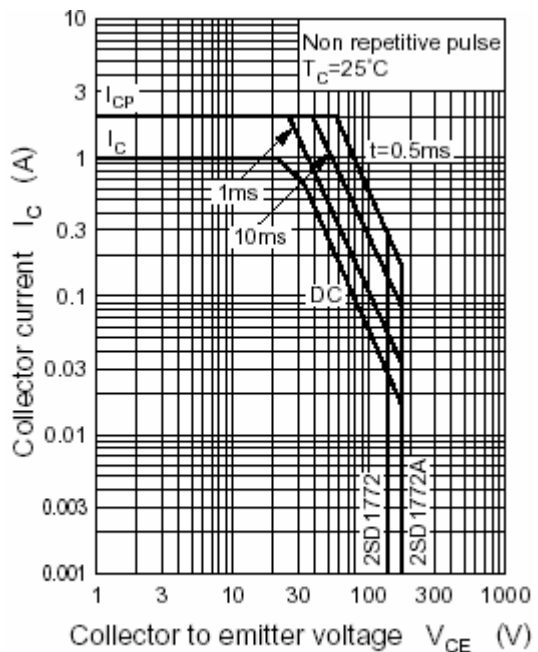


Fig.6 Safe Operating Area