

2SD1772, 2SD1772A

Silicon NPN triple diffusion planar type

For power amplification

For TV vertical deflection output

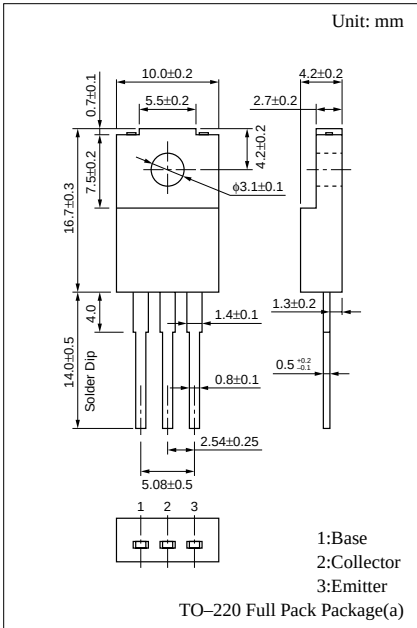
Complementary to 2SB1192 and 2SB1192A

■ Features

- Large collector power dissipation P_C
- Full-pack package which can be installed to the heat sink with one screw

■ Absolute Maximum Ratings ($T_C=25^\circ\text{C}$)

Parameter		Symbol	Ratings	Unit
Collector to base voltage	2SD1772	V_{CBO}	200	V
	2SD1772A		200	
Collector to emitter voltage	2SD1772	V_{CEO}	150	V
	2SD1772A		180	
Emitter to base voltage		V_{EBO}	6	V
Peak collector current		I_{CP}	2	A
Collector current		I_C	1	A
Collector power dissipation	$T_C=25^{\circ}\text{C}$	P_C	25	W
	$T_a=25^{\circ}\text{C}$		2	
Junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature		T_{sig}	-55 to +150	$^{\circ}\text{C}$

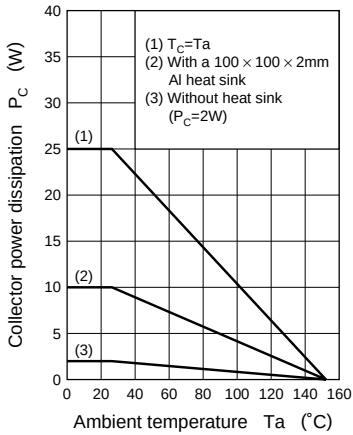
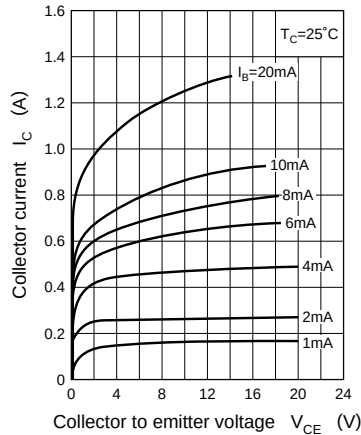
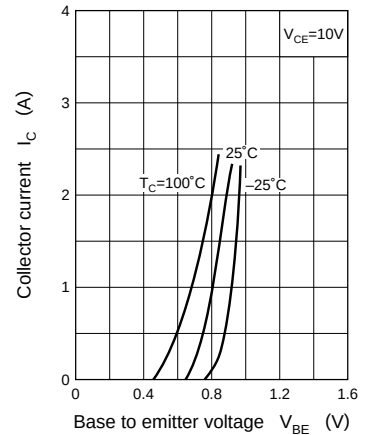
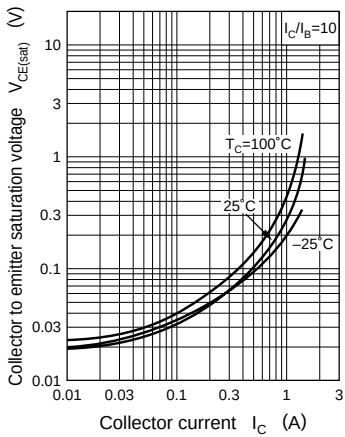
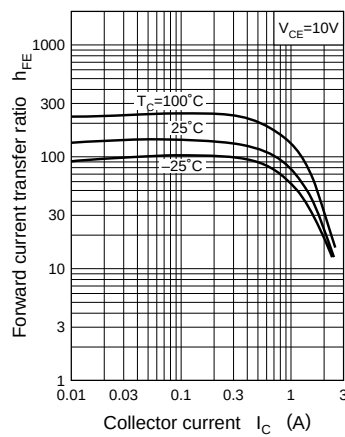
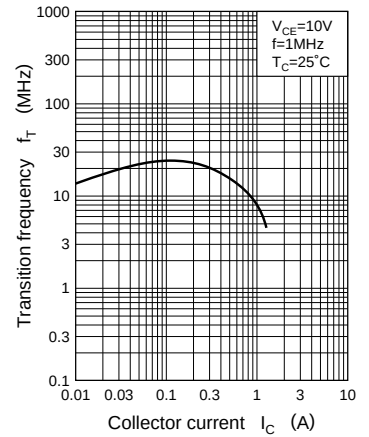


■ Electrical Characteristics ($T_C=25^\circ\text{C}$)

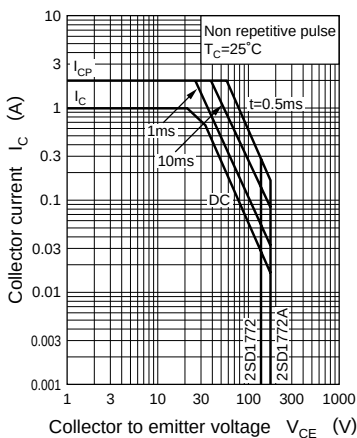
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 200\text{V}, I_E = 0$			50	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$			50	μA
Collector to emitter voltage	V_{CEO}	$I_C = 5\text{mA}, I_B = 0$	2SD1772 150			V
2SD1772A 180						
Emitter to base voltage	V_{EBO}	$I_E = 0.5\text{mA}, I_C = 0$	6			V
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = 10\text{V}, I_C = 100\text{mA}$	60		240	
	h_{FE2}	$V_{CE} = 10\text{V}, I_C = 300\text{mA}$	50			
Base to emitter voltage	V_{BE}	$V_{CE} = 10\text{V}, I_C = 300\text{mA}$			1	V
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$			1	V
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_C = 100\text{mA}, f = 1\text{MHz}$		20		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		27		pF

* h_{FE1} Rank classification

Rank	Q	P
h_{FE1}	60 to 140	100 to 240

$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(\text{sat})} - I_C$  $h_{FE} - I_C$  $f_T - I_C$ 

Area of safe operation (ASO)

 $R_{th(t)} - t$ 