

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

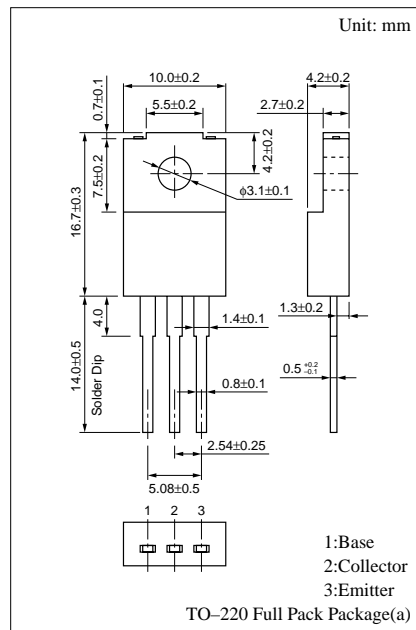
Parameter	Symbol	Ratings	Unit	
Collector to base voltage	2SD1772	200	V	
	2SD1772A	200		
Collector to emitter voltage	2SD1772	150	V	
	2SD1772A	180		
Emitter to base voltage	V_{EBO}	6	V	
Peak collector current	I_{CP}	2	A	
Collector current	I_C	1	A	
Collector power dissipation	P_C	$T_C=25^\circ\text{C}$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

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

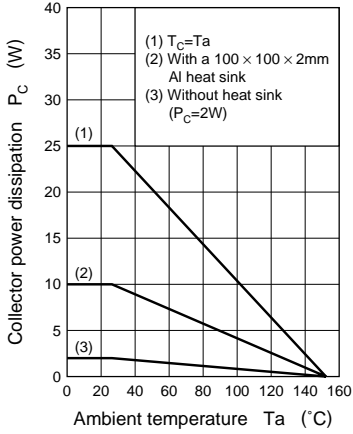
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 200\text{V}, I_E = 0$			50	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$			50	μA
Collector to emitter voltage	V_{CEO}	$I_C = 5\text{mA}, I_B = 0$	150			V
			180			
Emitter to base voltage	V_{EBO}	$I_E = 0.5\text{mA}, I_C = 0$	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

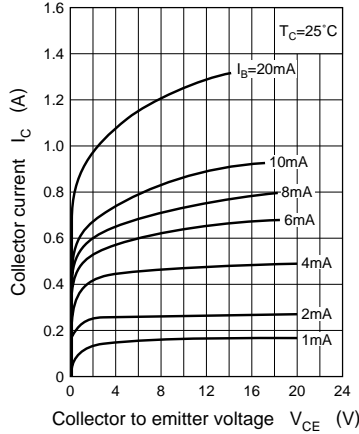
Rank	Q	P
h_{FE1}	60 to 140	100 to 240



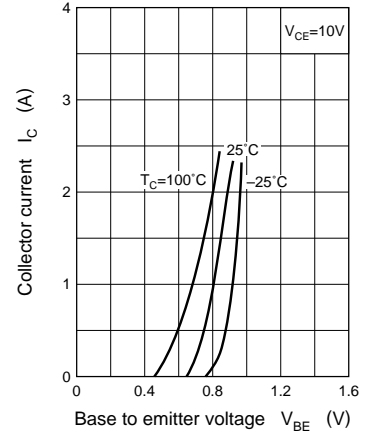
$P_C - T_a$



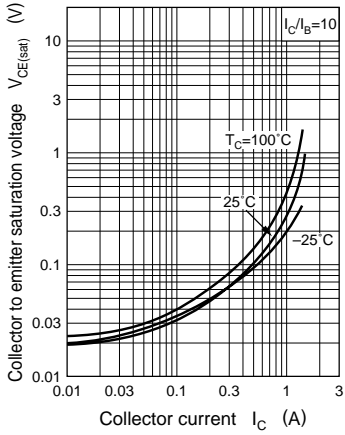
$I_C - V_{CE}$



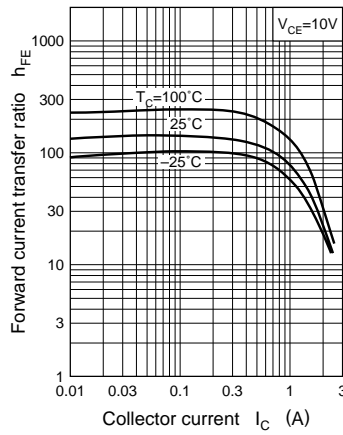
$I_C - V_{BE}$



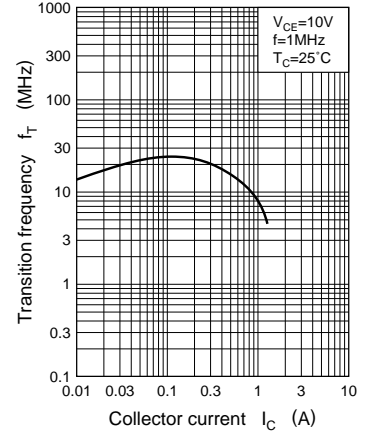
$V_{CE(sat)} - I_C$



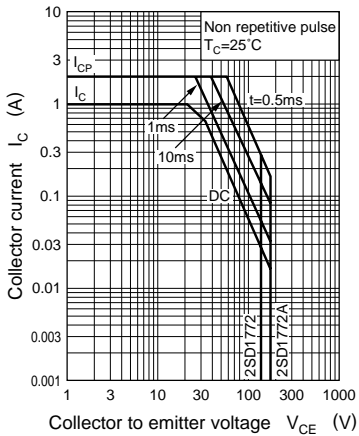
$h_{FE} - I_C$



$f_T - I_C$



Area of safe operation (ASO)



$R_{th(t)} - t$

