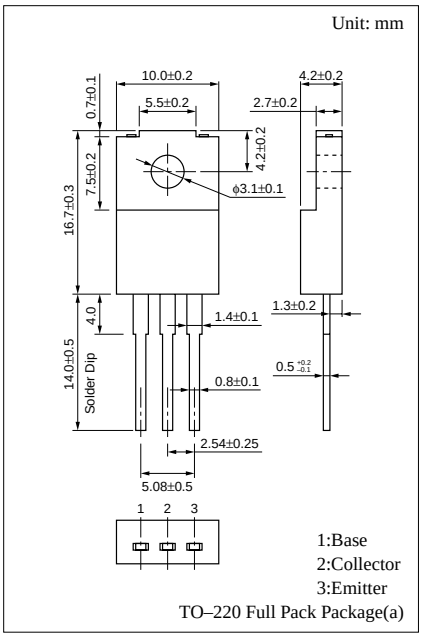
2SD1772, 2SD1772A

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˚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°C	P_C	25	W
	Ta=25°C		2	
Junction temperature		T_j	150	˚C
Storage temperature		T_{stg}	–55 to +150	˚C

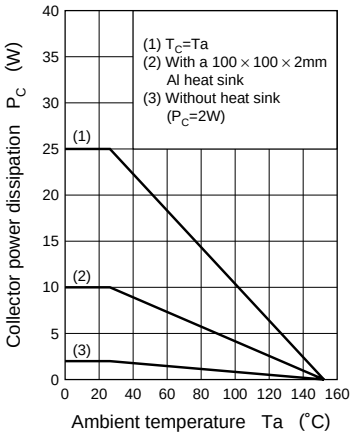
Electrical Characteristics (T_C=25˚C)

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

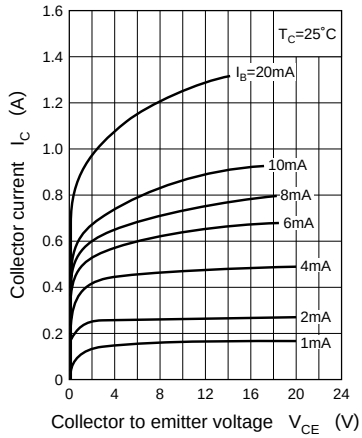
*h_{FE1} Rank classification

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

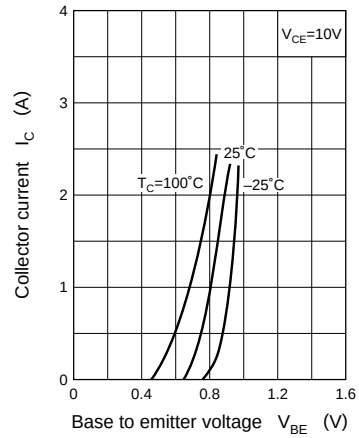
P_C — Ta



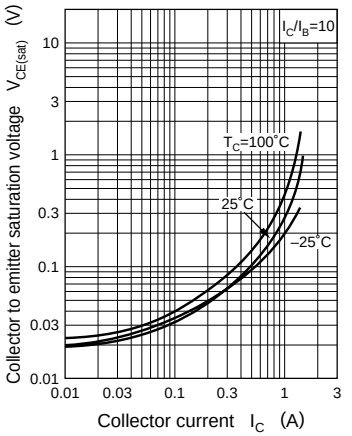
I_C — V_{CE}



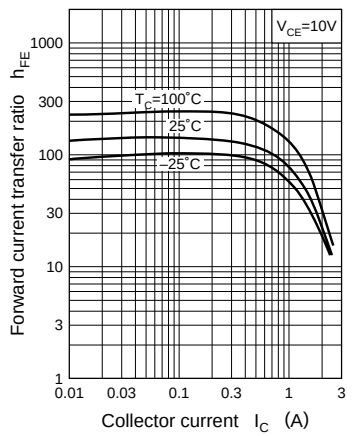
I_C — V_{BE}



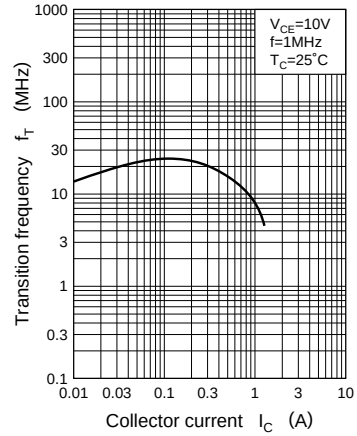
$V_{CE(sat)}$ — I_C



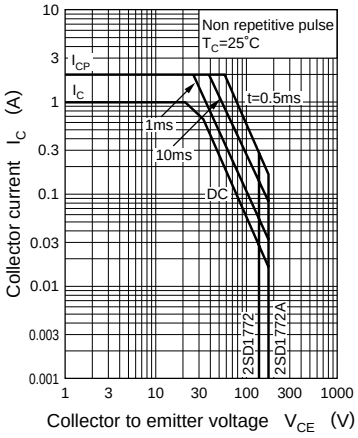
h_{FE} — I_C



f_T — I_C



Area of safe operation (ASO)



$R_{th(t)}$ — t