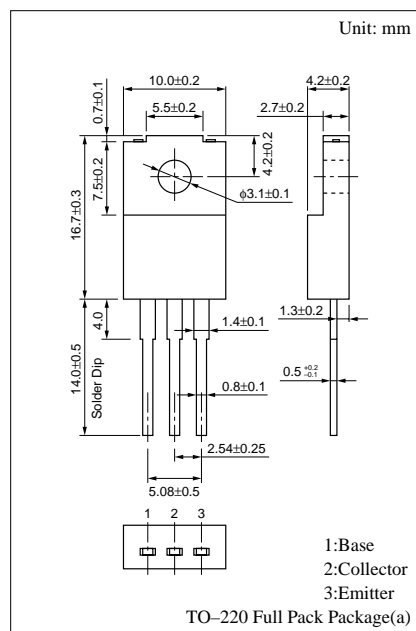


## Silicon NPN triple diffusion planar type

Complementary to 2SB1192 and 2SB1192A

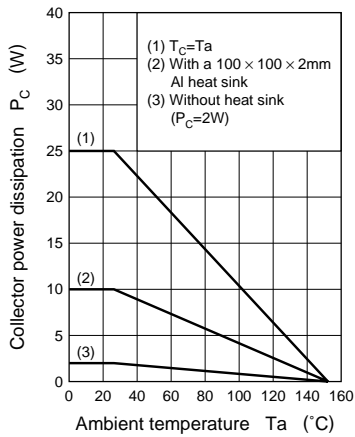
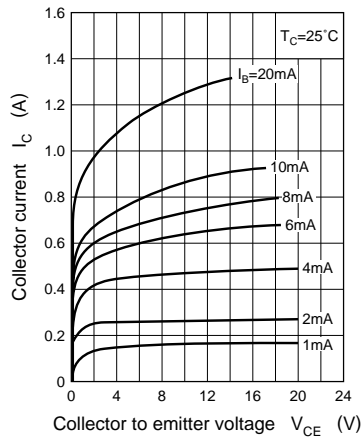
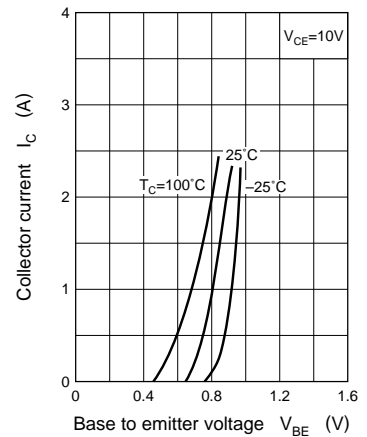
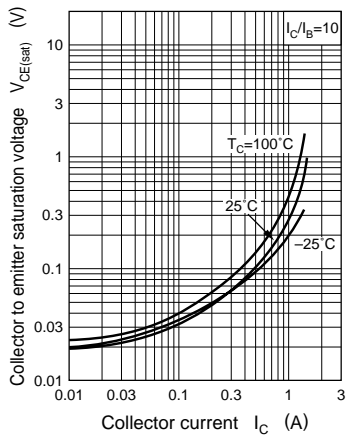
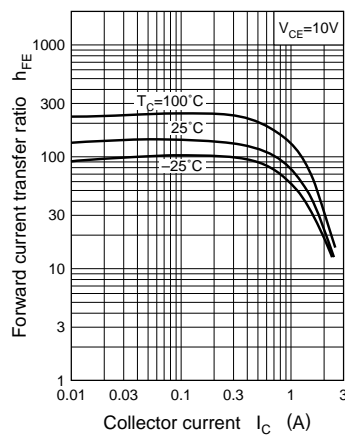
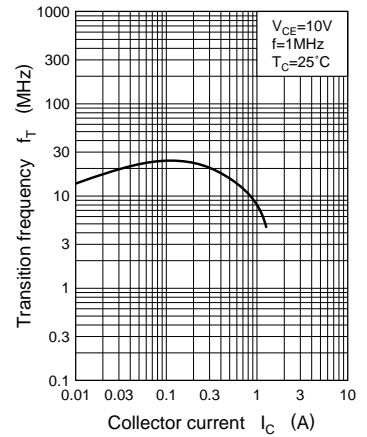
- Large collector power dissipation  $P_C$
- Full-pack package which can be installed to the heat sink with one screw

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		$T_{stg}$	-55 to +150	$^{\circ}\text{C}$

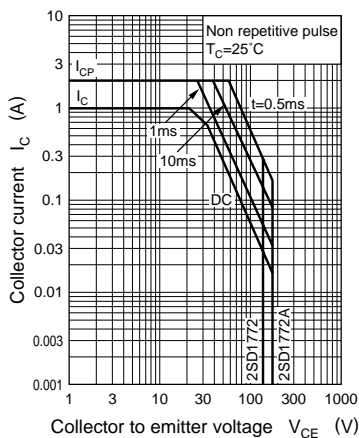
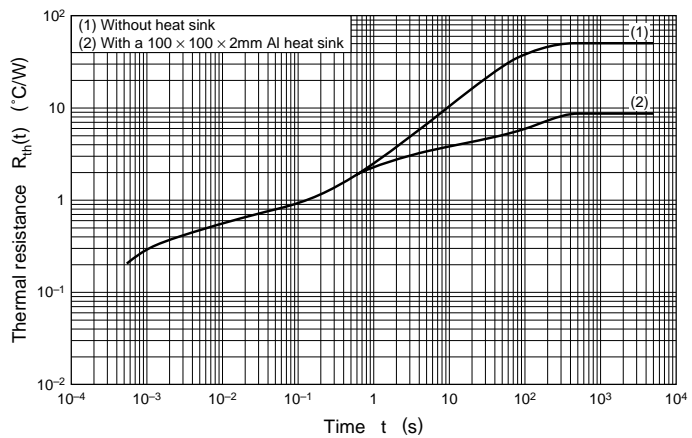


Parameter		Symbol	Conditions	min	typ	max	Unit
Collector cutoff current		$I_{CBO}$	$V_{CB} = 200V, I_E = 0$			50	$\mu A$
Emitter cutoff current		$I_{EBO}$	$V_{EB} = 4V, I_C = 0$			50	$\mu A$
Collector to emitter voltage	2SD1772	$V_{CEO}$	$I_C = 5mA, I_B = 0$	150			V
	2SD1772A			180			
Emitter to base 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

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)

 $R_{th(t)} - t$ 

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