

2SD1272

Silicon NPN triple diffusion planar type

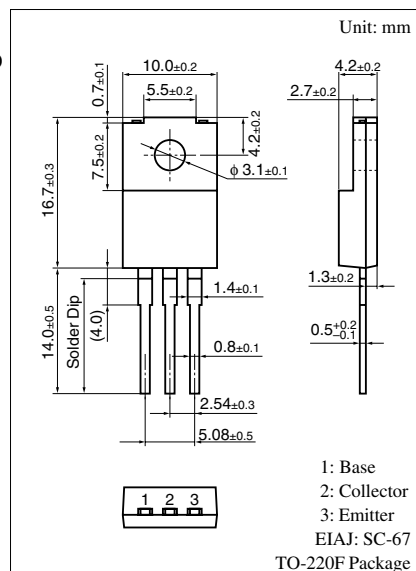
For high-speed switching and high current amplification ratio

■ Features

- High forward current transfer ratio h_{FE}
- Satisfactory linearity of forward current transfer ratio h_{FE}
- 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	Rating	Unit
Collector to base voltage	V_{CBO}	200	V
Collector to emitter voltage	V_{CEO}	150	V
Emitter to base voltage	V_{EBO}	6	V
Peak collector current	I_{CP}	2.5	A
Collector current	I_C	1	A
Base current	I_B	0.1	A
Collector power dissipation	$T_C = 25^\circ\text{C}$ $T_a = 25^\circ\text{C}$	P_C	W
		40 2	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

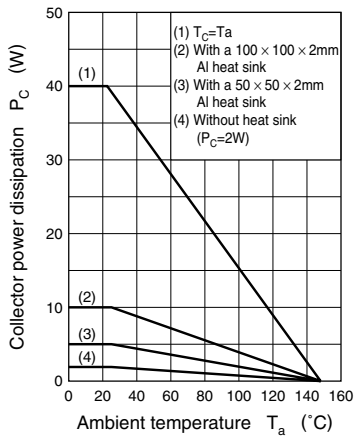
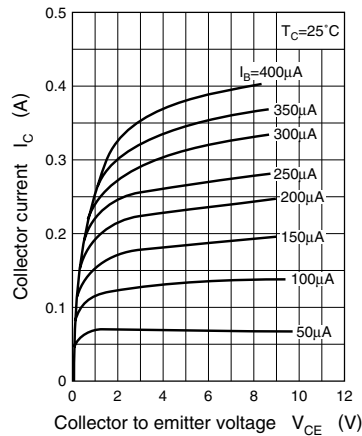
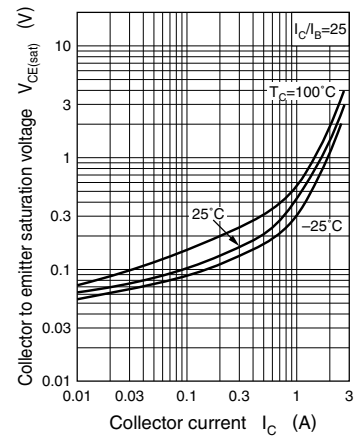
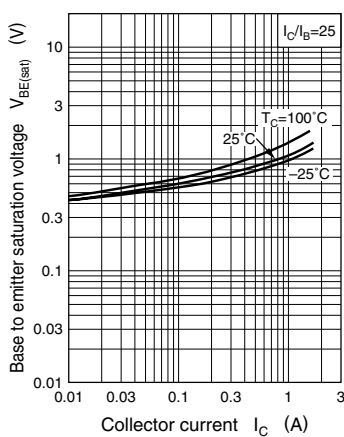
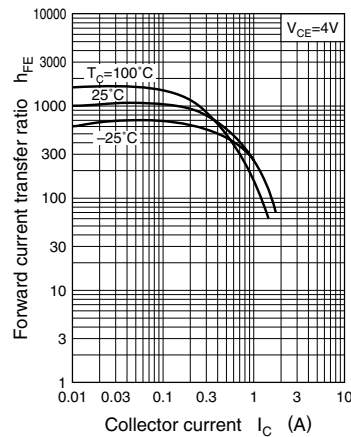
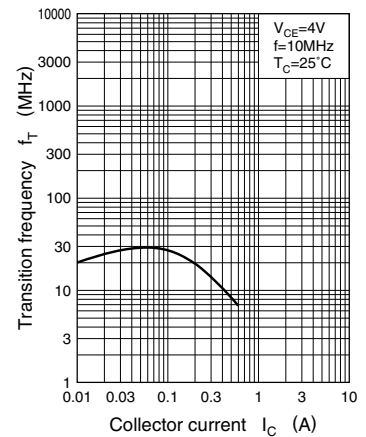


■ Electrical Characteristics $T_C = 25^\circ\text{C}$

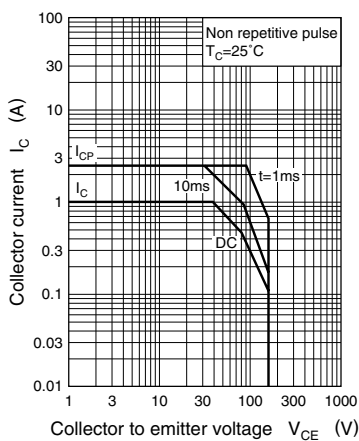
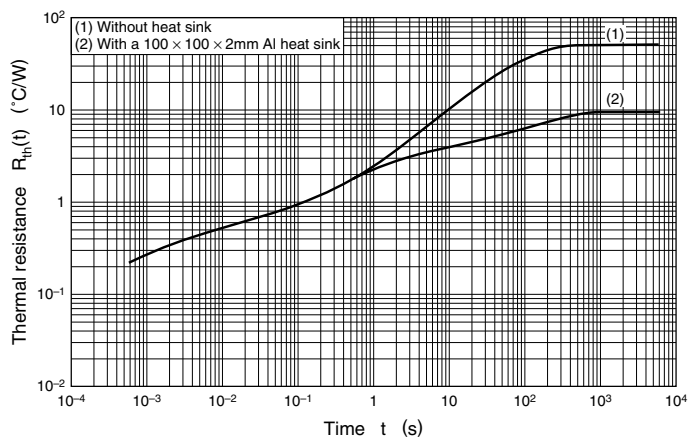
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 200\text{ V}, I_E = 0$			100	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 6\text{ V}, I_C = 0$			100	μA
Collector to emitter voltage	V_{CEO}	$I_C = 25\text{ mA}, I_B = 0$	150			V
Forward current transfer ratio *	h_{FE}	$V_{CE} = 4\text{ V}, I_C = 0.2\text{ A}$	500		2 000	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 0.5\text{ A}, I_B = 0.02\text{ A}$			1	V
Transition frequency	f_T	$V_{CE} = 4\text{ V}, I_C = 0.1\text{ A}, f = 10\text{ MHz}$		25		MHz

Note) *: Rank classification

Rank	Q	P
h_{FE}	500 to 1 200	800 to 2 000

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

Area of safe operation (ASO)

 $R_{th(t)} - t$ 

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