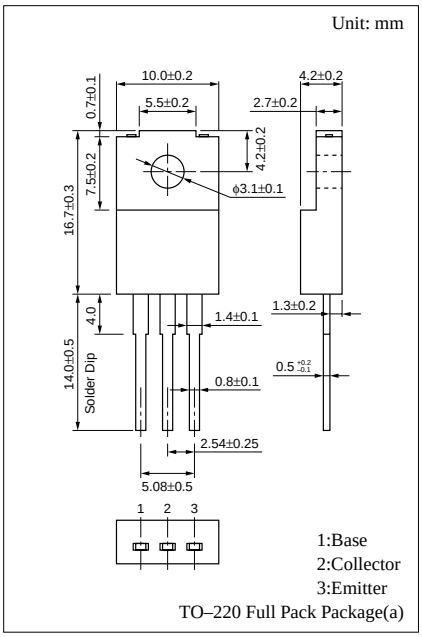
2SD1272

Silicon NPN triple diffusion planar type

For high-speed switching and high current amplification ratio



Features

- High foward current transfer ratio h_{FE}
- Satisfactory linearity of foward 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˚C)

Parameter		Symbol	Ratings	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°C	P_C	40	W
	Ta=25°C		2	
Junction temperature		T_j	150	˚C
Storage temperature		T_{stg}	–55 to +150	˚C

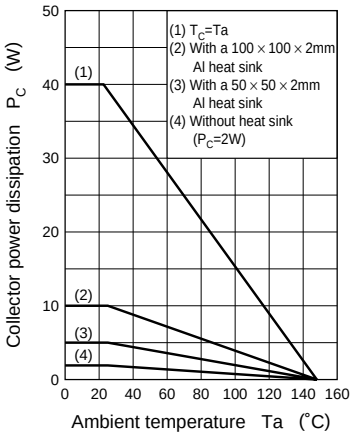
Electrical Characteristics (T_C=25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 200V, I_E = 0			100	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 6V, I_C = 0			100	μA
Collector to emitter voltage	V_{CEO}	I_C = 25mA, I_B = 0	150			V
Forward current transfer ratio	h_{FE}*	V_{CE} = 4V, I_C = 0.2A	500		2000	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 0.5A, I_B = 0.02A			1	V
Transition frequency	f_T	V_{CE} = 4V, I_C = 0.1A, f = 10MHz		25		MHz

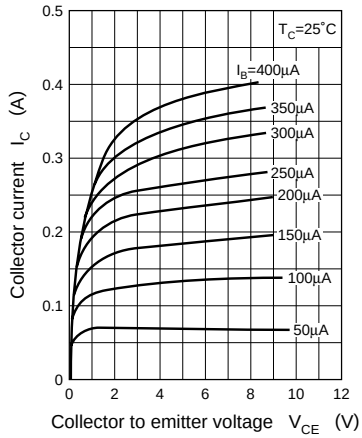
*h_{FE} Rank classification

Rank	Q	P
h_{FE}	500 to 1200	800 to 2000

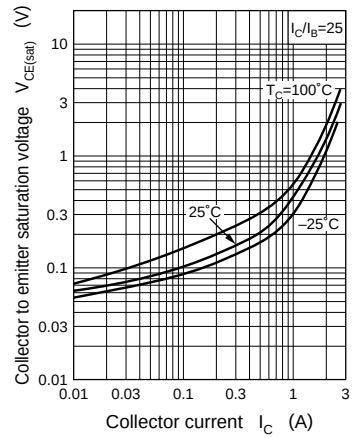
P_C — Ta



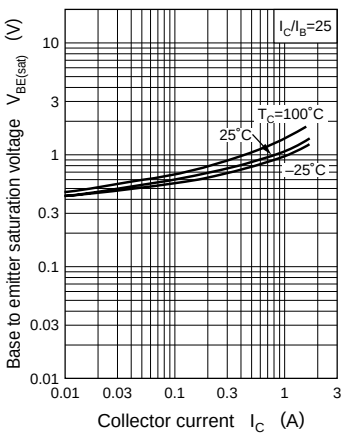
I_C — V_{CE}



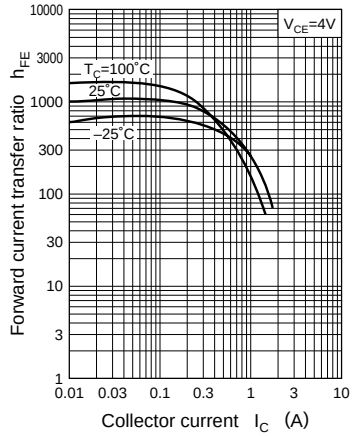
$V_{CE(sat)}$ — I_C



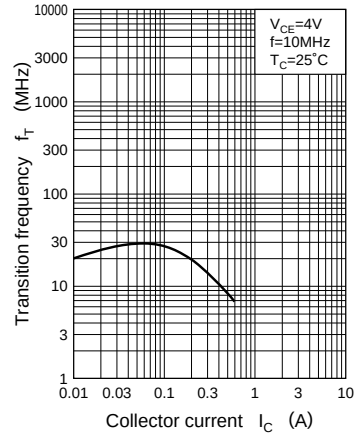
$V_{BE(sat)}$ — I_C



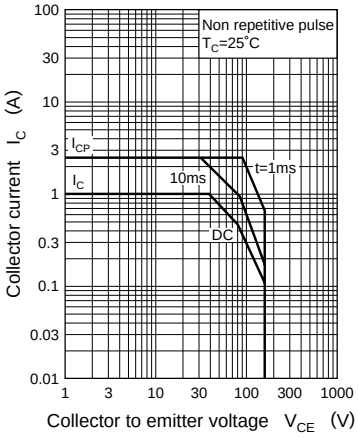
h_{FE} — I_C



f_T — I_C



Area of safe operation (ASO)



$R_{th(t)}$ — t