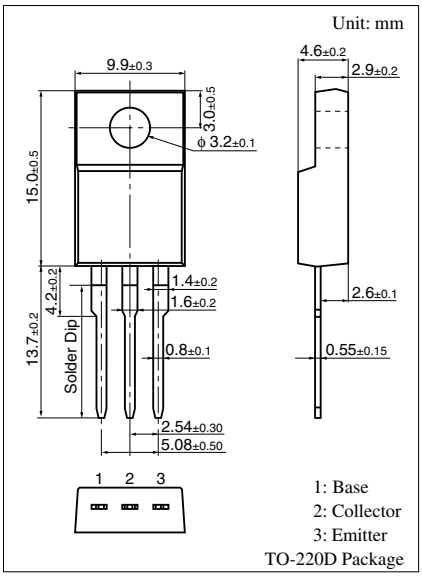
2SD2375

Silicon NPN triple diffusion planar type

For power amplification with high forward current transfer ratio



■ Features

- High forward current transfer ratio h_{FE} which has satisfactory linearity
- Full-pack package which can be installed to the heat sink with one screw

■ Absolute Maximum Ratings $T_C = 25°C$

Parameter		Symbol	Rating	Unit
Collector to base voltage		V_{CBO}	80	V
Collector to emitter voltage		V_{CEO}	60	V
Emitter to base voltage		V_{EBO}	6	V
Peak collector current		I_{CP}	6	A
Collector current		I_C	3	A
Base current		I_B	1	A
Collector power dissipation	$T_C = 25°C$	P_C	25	W
	$T_a = 25°C$		2	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_C = 25°C$

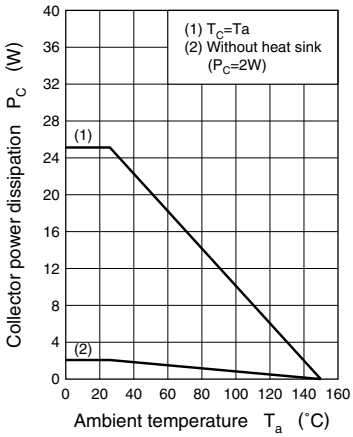
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 80 V, I_E = 0			100	μA
	I_{CEO}	V_{CE} = 40 V, I_B = 0			100	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 6 V, I_C = 0			100	μA
Collector to emitter voltage	V_{CEO}	I_C = 25 mA, I_B = 0	60			V
Forward current transfer ratio *	h_{FE}	V_{CE} = 4 V, I_C = 0.5 A	500		1 500	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 2 A, I_B = 0.05 A			1	V
Transition frequency	f_T	V_{CE} = 12 V, I_C = 0.2 A, f = 10 MHz		50		MHz

Note) ∗: Rank classification

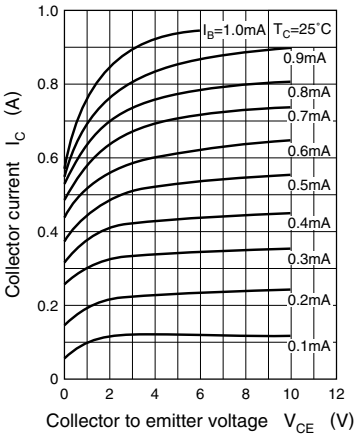
Rank	Q	P
h_{FE}	500 to 1 000	800 to 1 500

Ordering can be made by the common rank (PQ rank h_{FE} = 500 to 1 500) in the rank classification.

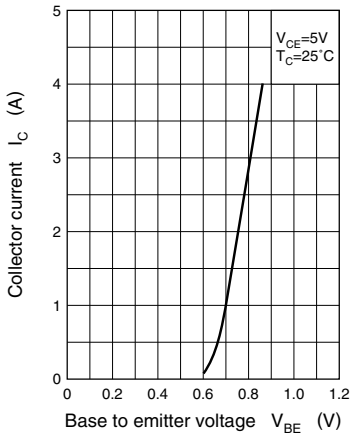
P_C — T_a



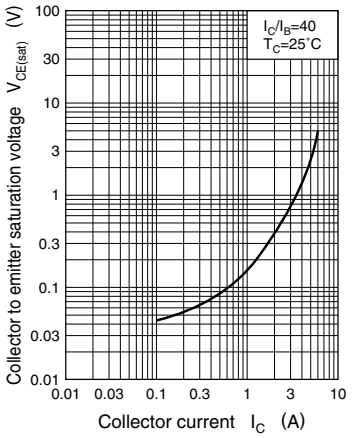
I_C — V_{CE}



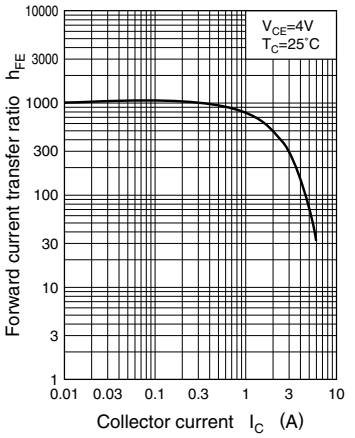
I_C — V_{BE}



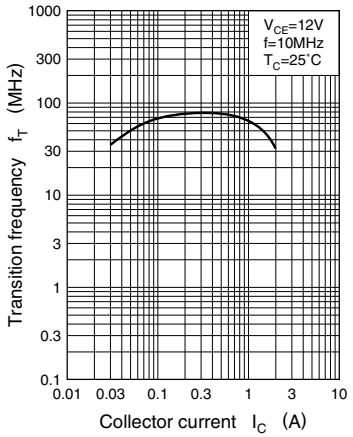
$V_{CE(sat)}$ — I_C



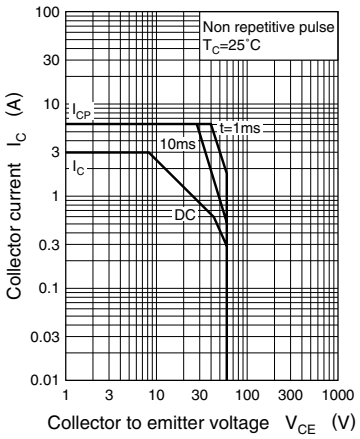
h_{FE} — I_C



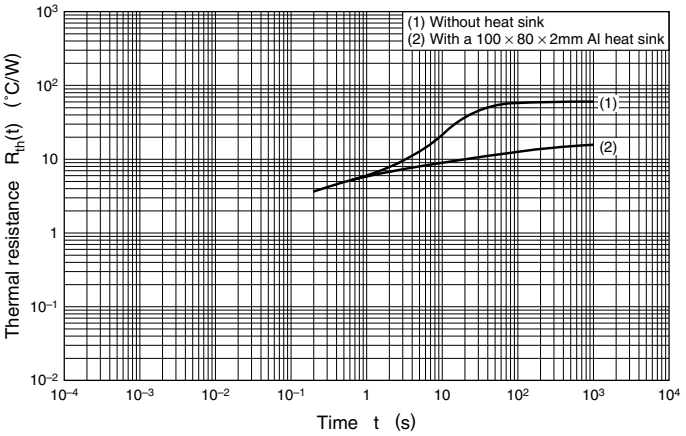
f_T — I_C



Area of safe operation (ASO)



$R_{th(t)}$ — t



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