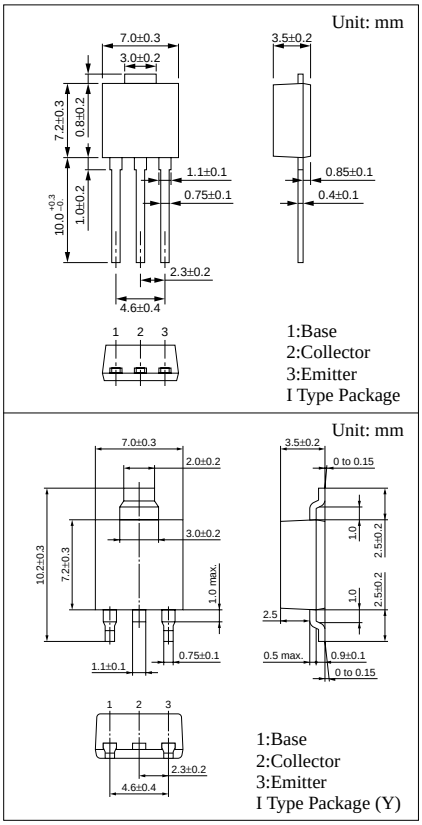
2SD1741, 2SD1741A

Silicon NPN triple diffusion planar type

For power amplification
For TV vertical deflection output
Complementary to 2SB1171 and 2SB1171A



Features

- High forward current transfer ratio h_{FE} which has satisfactory linearity
- Low collector to emitter saturation voltage $V_{CE(sat)}$
- I type package enabling direct soldering of the radiating fin to the printed circuit board, etc. of small electronic equipment.

Absolute Maximum Ratings (T_C=25˚C)

Parameter		Symbol	Ratings	Unit
Collector to base voltage	2SD1741	V_{CBO}	200	V
	2SD1741A		200	
Collector to emitter voltage	2SD1741	V_{CEO}	150	V
	2SD1741A		180	
Emitter to base voltage		V_{EBO}	6	V
Peak collector current		I_{CP}	3	A
Collector current		I_C	2	A
Collector power dissipation	T_C=25°C	P_C	15	W
	Ta=25°C		1.3	
Junction temperature		T_j	150	˚C
Storage temperature		T_{stg}	–55 to +150	˚C

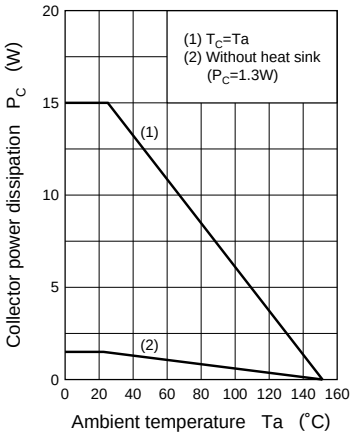
Electrical Characteristics (T_C=25˚C)

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 base voltage		V_{CBO}	I_C = 50μA, I_E = 0	200			V
Collector to emitter voltage	2SD1741	V_{CEO}	I_C = 5mA, I_B = 0	150			V
	2SD1741A			180			
Emitter to base voltage		V_{EBO}	I_E = 500μA, I_C = 0	6			V
Forward current transfer ratio		h_{FE1}*	V_{CE} = 10V, I_C = 150mA	60		240	
		h_{FE2}	V_{CE} = 10V, I_C = 400mA	50			
Base to emitter voltage		V_{BE}	V_{CE} = 10V, I_C = 400mA			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 = 0.5A, f = 1MHz		20		MHz

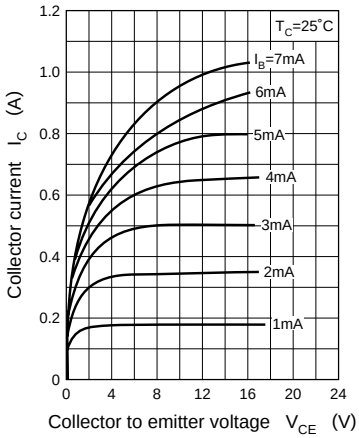
*h_{FE1} Rank classification

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

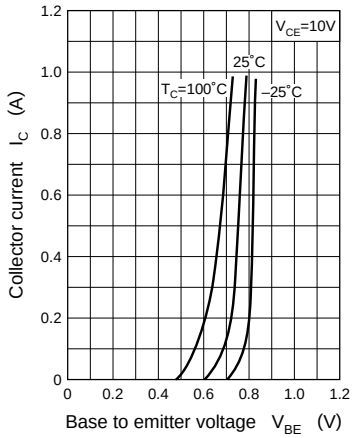
P_C — Ta



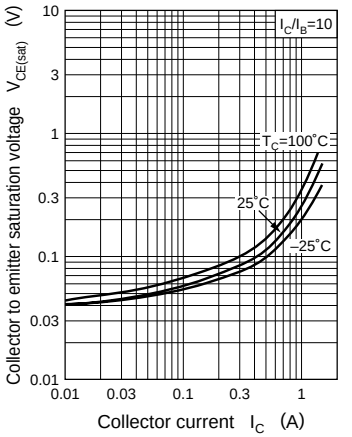
I_C — V_{CE}



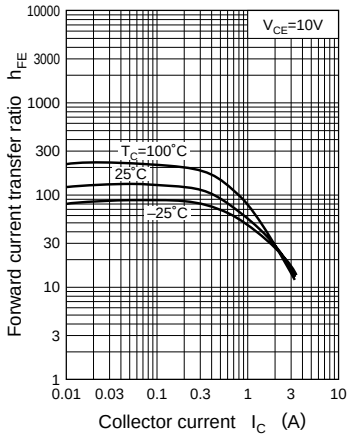
I_C — V_{BE}



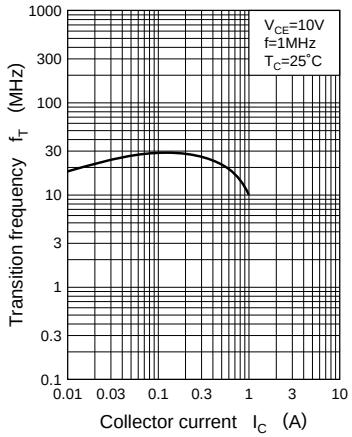
$V_{CE(sat)}$ — I_C



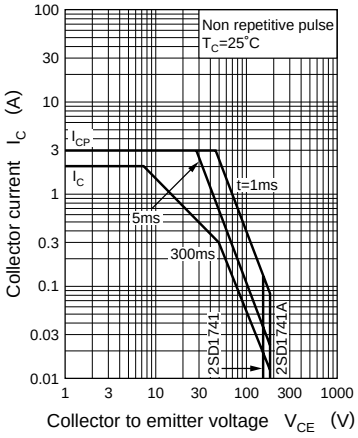
h_{FE} — I_C



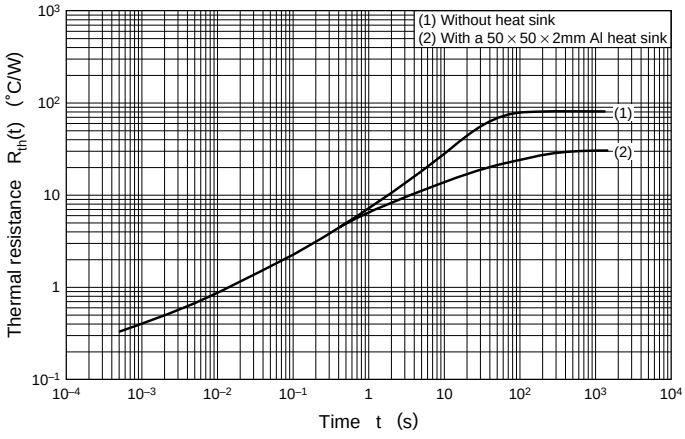
f_T — I_C



Area of safe operation (ASO)



$R_{th(t)}$ — t



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