

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 ($T_C=25^\circ\text{C}$)

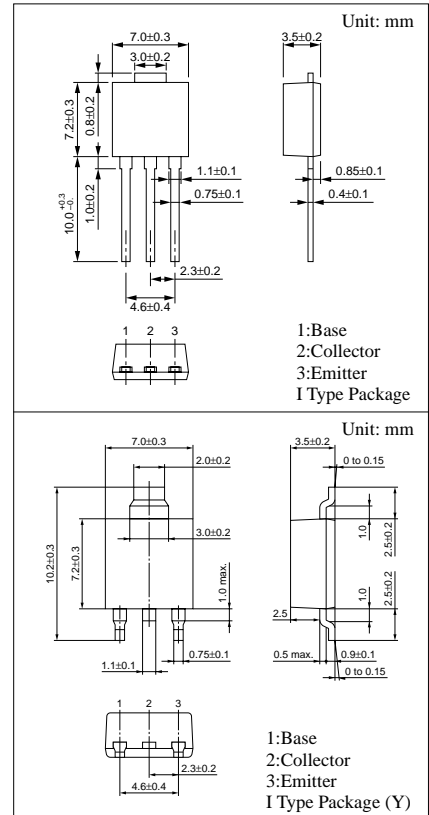
Parameter	Symbol	Rated	Unit	
Collector to base voltage	V_{CBO}	2SD1741	200	V
2SD1741A				
Collector to emitter voltage	V_{CEO}	2SD1741	150	V
2SD1741A		180		
Emitter to base voltage	V_{EBO}	6	V	
Peak collector current	I_{CP}	3	A	
Collector current	I_C	2	A	
Collector power dissipation	P_C	$T_C=25^\circ\text{C}$	15	W
$T_a=25^\circ\text{C}$		1.3		
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$	

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

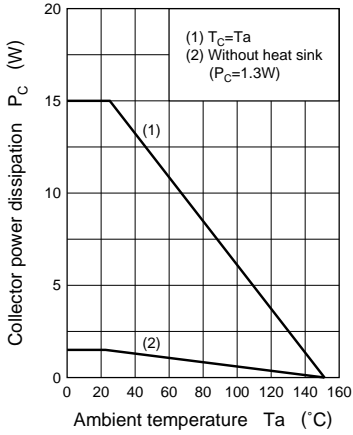
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 200\text{V}, I_E = 0$			50	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$			50	μA
Collector to base voltage	V_{CBO}	$I_C = 50\mu\text{A}, I_E = 0$	200			V
Collector to emitter voltage	V_{CEO}	$I_C = 5\text{mA}, I_B = 0$	2SD1741	150		V
			2SD1741A	180		
Emitter to base voltage	V_{EBO}	$I_E = 500\mu\text{A}, I_C = 0$	6			V
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = 10\text{V}, I_C = 150\text{mA}$	60		240	
	h_{FE2}	$V_{CE} = 10\text{V}, I_C = 400\text{mA}$	50			
Base to emitter voltage	V_{BE}	$V_{CE} = 10\text{V}, I_C = 400\text{mA}$			1	V
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$			1	V
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_C = 0.5\text{A}, f = 1\text{MHz}$		20		MHz

* h_{FE1} Rank classification

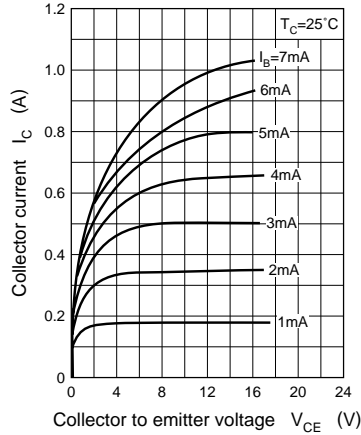
Rank	Q	P
h_{FE1}	60 to 140	100 to 240



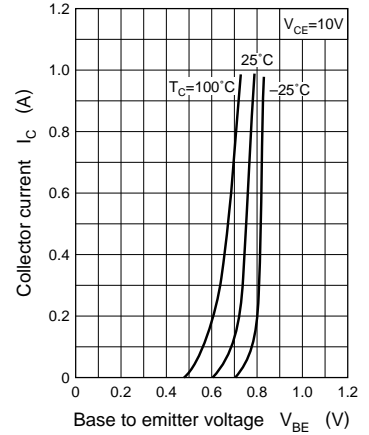
$P_C - T_a$



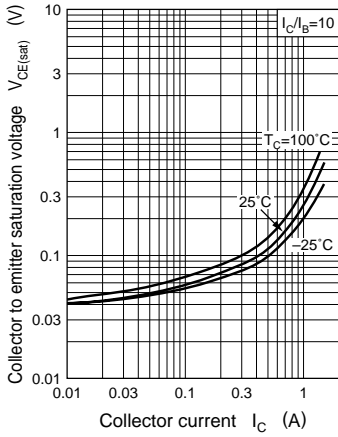
$I_C - V_{CE}$



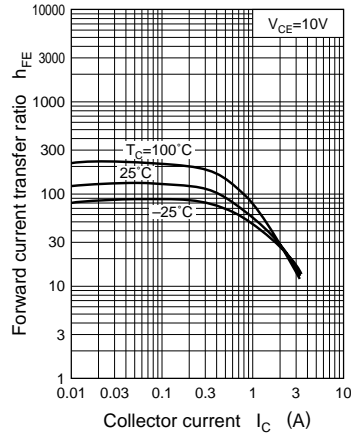
$I_C - V_{BE}$



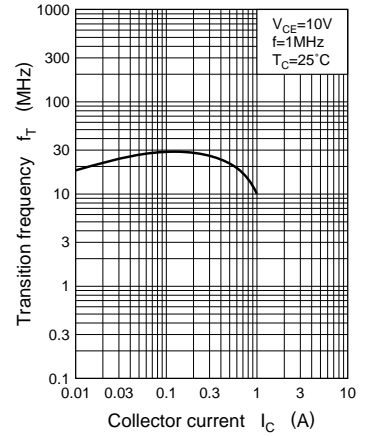
$V_{CE(sat)} - I_C$



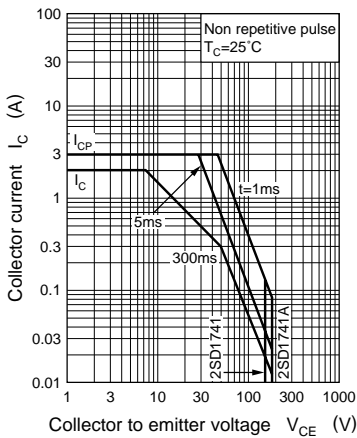
$h_{FE} - I_C$



$f_T - I_C$



Area of safe operation (ASO)



$R_{th(t)} - t$

