

# 2SD1741, 2SD1741A

## Silicon NPN triple diffusion planar type

For power amplification

For TV vertical deflection output

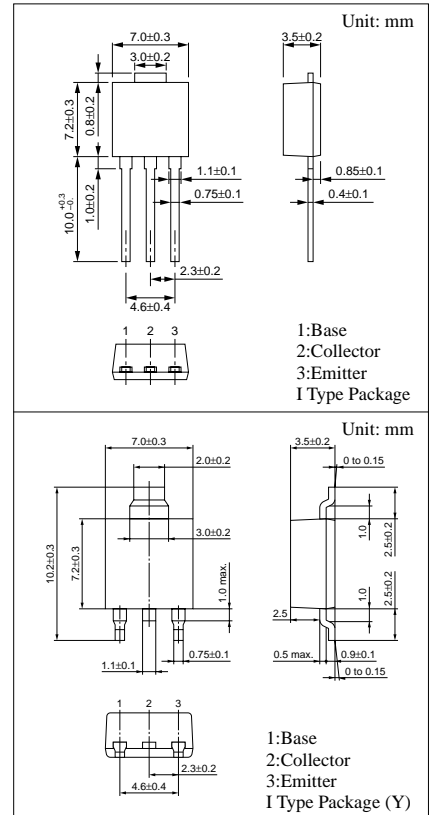
Complementary to 2SB1171 and 2SB1171A

### 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	$^\circ\text{C}$	



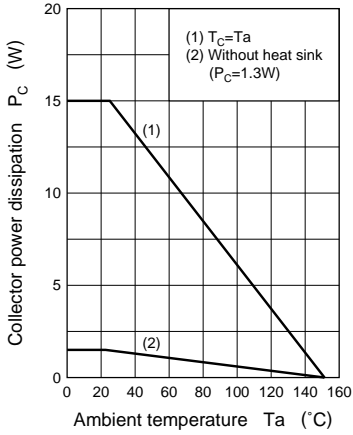
### Electrical Characteristics ( $T_C=25^\circ\text{C}$ )

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 200\text{V}, I_E = 0$			50	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$			50	$\mu\text{A}$
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

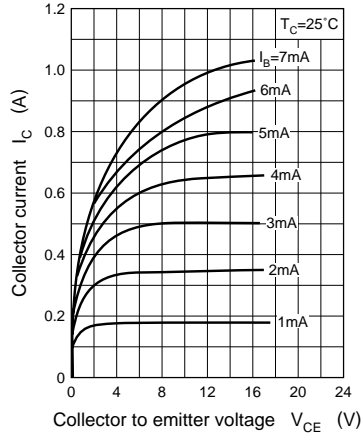
\* $h_{FE1}$  Rank classification

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

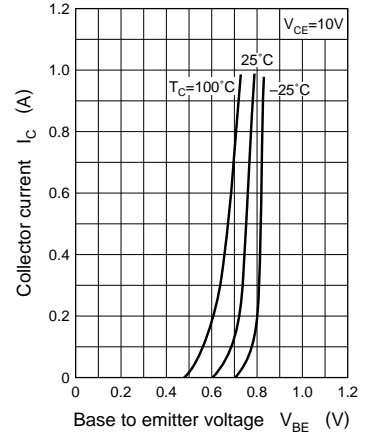
$P_C - T_a$



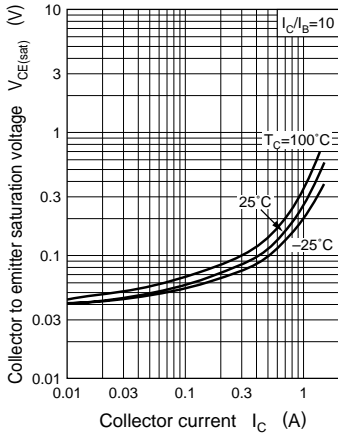
$I_C - V_{CE}$



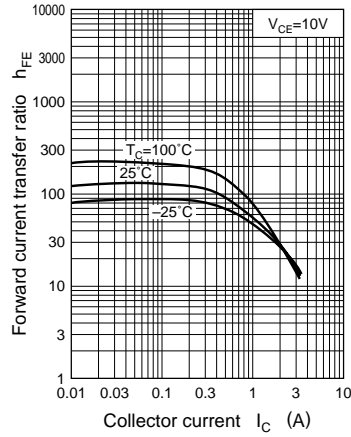
$I_C - V_{BE}$



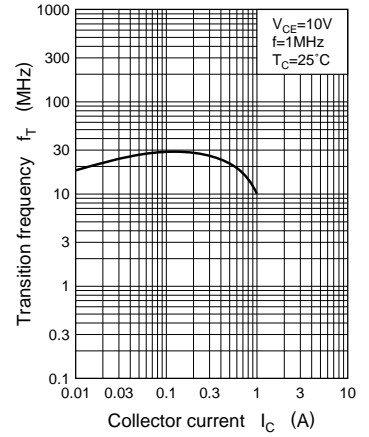
$V_{CE(sat)} - I_C$



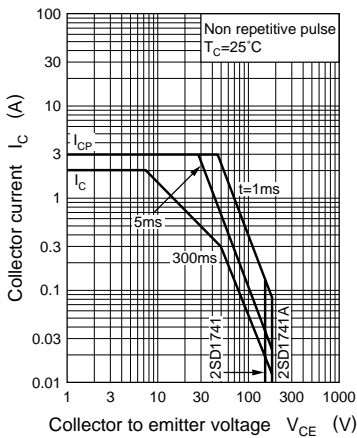
$h_{FE} - I_C$



$f_T - I_C$



Area of safe operation (ASO)



$R_{th(t)} - t$

