

2SD1754, 2SD1754A

Silicon NPN triple diffusion planar type

For power amplification with high forward current transfer ratio

Features

- High forward current transfer ratio h_{FE}
- Satisfactory linearity of forward current transfer ratio h_{FE}
- 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	Ratings	Unit
Collector to base voltage	2SD1754	V_{CBO}	80	V
	2SD1754A		100	
Collector to emitter voltage	2SD1754	V_{CEO}	60	V
	2SD1754A		80	
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	$T_C=25^{\circ}\text{C}$	P_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}	$V_{CB} = 80\text{V}, I_E = 0$			100	μA
2SD1754A		$V_{CB} = 100\text{V}, I_E = 0$			100	
Collector cutoff current	I_{CEO}	$V_{CE} = 40\text{V}, I_B = 0$			100	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 6\text{V}, I_C = 0$			100	μA
Collector to emitter voltage	V_{CEO}	$I_C = 25\text{mA}, I_B = 0$	60			V
2SD1754A			80			
Forward current transfer ratio	h_{FE}^*	$V_{CE} = 4\text{V}, I_C = 0.5\text{A}$	500		1500	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2\text{A}, I_B = 0.05\text{A}$			1	V
Transition frequency	f_T	$V_{CE} = 12\text{V}, I_C = 0.2\text{A}, f = 10\text{MHz}$		30		MHz

* h_{FE} Rank classification

Rank	Q	P
h_{FE}	500 to 1000	800 to 1500



