

# 2SB1724, 2SB1724A

## Silicon PNP epitaxial planar type

For power amplification

Complementary to 2SD2693 and 2SD2693A

### ■ Features

- Wide safe operation area
- Satisfactory linearity of forward current transfer ratio  $h_{FE}$
- Low collector-emitter saturation voltage  $V_{CE(sat)}$
- Full-pack package which can be installed to the heat sink with one screw

### ■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	2SB1724 2SB1724A	$V_{CBO}$	-60 -80	V
Collector-emitter voltage (Base open)	2SB1724 2SB1724A	$V_{CEO}$	-60 -80	V
Emitter-base voltage (Collector open)	$V_{EBO}$	-6	V	
Collector current	$I_C$	-3	A	
Peak collector current	$I_{CP}$	-5	A	
Collector power dissipation	$P_C$	30	W	
	$T_a = 25^\circ\text{C}$	2.0		
Junction temperature	$T_j$	150	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$	

### ■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

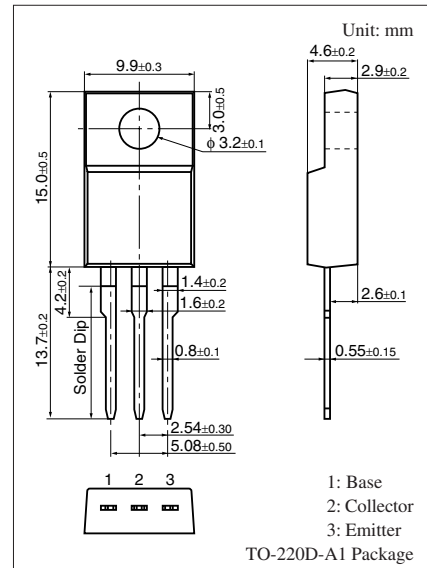
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	2SB1724 2SB1724A	$V_{CEO}$ $I_C = -30\text{ mA}$ , $I_B = 0$	-60 -80			V
Collector-base cutoff current (Emitter open)	2SB1724 2SB1724A	$I_{CBO}$ $V_{CB} = -60\text{ V}$ , $I_E = 0$ $V_{CB} = -80\text{ V}$ , $I_E = 0$			-100	$\mu\text{A}$
Collector-emitter cutoff current (Base open)	2SB1724 2SB1724A	$I_{CEO}$ $V_{CE} = -60\text{ V}$ , $I_B = 0$ $V_{CE} = -80\text{ V}$ , $I_B = 0$			-100	$\mu\text{A}$
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = -6\text{ V}$ , $I_C = 0$			-1	mA
Forward current transfer ratio <sup>*1</sup>	$h_{FE1}$ <sup>*2</sup> $h_{FE2}$	$V_{CE} = -4\text{ V}$ , $I_C = -1\text{ A}$ $V_{CE} = -4\text{ V}$ , $I_C = -3\text{ A}$	70 10		250	—
Collector-emitter saturation voltage <sup>*1</sup>	$V_{CE(sat)}$	$I_C = -3\text{ A}$ , $I_B = -0.375\text{ A}$			-0.8	V
Transition frequency	$f_T$	$V_{CE} = -10\text{ V}$ , $I_C = -0.5\text{ A}$ , $f = 10\text{ MHz}$		30		MHz
Turn-on time	$t_{on}$	$I_C = -1\text{ A}$ , Resistance loaded		0.15		$\mu\text{s}$
Storage time	$t_{stg}$	$I_{B1} = -0.1\text{ A}$ , $I_{B2} = 0.1\text{ A}$		0.8		$\mu\text{s}$
Fall time	$t_f$	$V_{CC} = 50\text{ V}$		0.2		$\mu\text{s}$

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

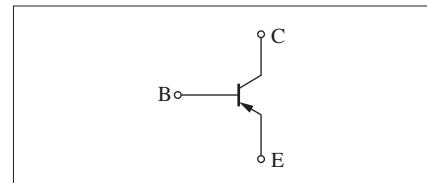
2. \*1: Pulse measurement

\*2: Rank classification

Rank	Q	P
$h_{FE1}$	70 to 150	120 to 250



### Internal Connection



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