

2SD2693, 2SD2693A

Silicon NPN triple diffusion planar type

For power amplification

Complementary to 2SB1724, 2SB1724A

■ 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)	2SD2693	V_{CBO}	60	V
	2SD2693A		80	
Collector-emitter voltage (Base open)	2SD2693	V_{CEO}	60	V
	2SD2693A		80	
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 $T_a = 25^\circ\text{C}$	P_C	25	W	
		2.0		
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$	

Note) *: Non-repetitive peak collector current

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

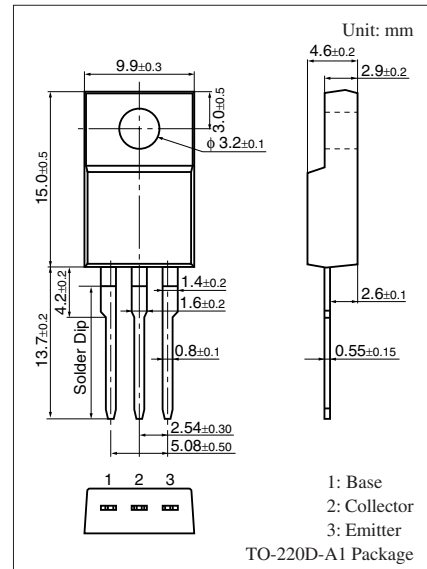
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open) *1	2SD2693	$I_C = 30 \text{ mA}, I_B = 0$	60			V
	2SD2693A		80			
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 80 \text{ V}, I_E = 0$			100	mA
Collector-emitter cutoff current (Base open)	2SD2693	$V_{CE} = 60 \text{ V}, I_B = 0$			100	μA
	2SD2693A		$V_{CE} = 80 \text{ V}, I_B = 0$			
Collector-emitter cutoff current (E-B short)	I_{CES}	$V_{CE} = 60 \text{ V}, I_B = 0$			100	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 6 \text{ V}, I_C = 0$			1	mA
Forward current transfer ratio *1	h_{FE1} *2	$V_{CE} = 4 \text{ V}, I_C = 1 \text{ A}$	70		250	—
	h_{FE2}	$V_{CE} = 4 \text{ V}, I_C = 3 \text{ A}$	10			
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = 3 \text{ A}, I_B = 0.375 \text{ A}$			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		0.1		μs
Storage time	t_{stg}	$I_{B1} = 0.1 \text{ A}, I_{B2} = -0.1 \text{ A}$		2.3		μs
Fall time	t_f	$V_{CC} = 50 \text{ V}$		0.3		μs

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

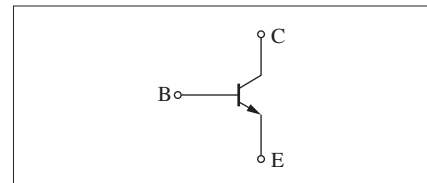
2. *1: Pulse measurement

*2: Rank classification

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



Internal Connection



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