2SD2693, 2SD2693A

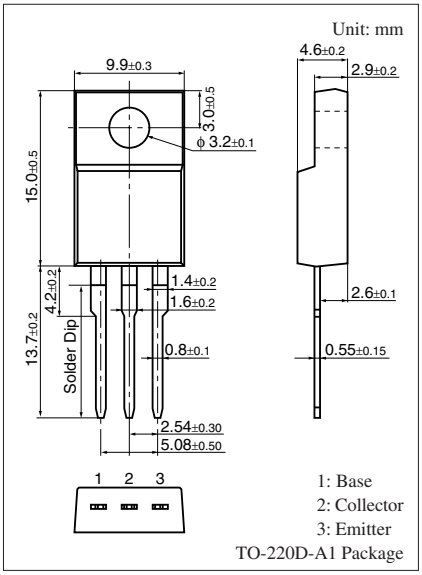
Silicon NPN triple diffusion planar type

For power amplification

Complementary to 2SB1724, 2SB1724A

■ Features

- Wide safe oeration 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.

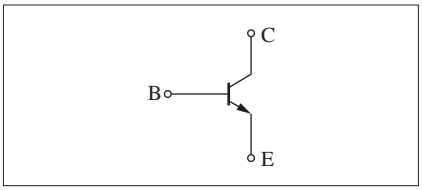


■ Absolute Maximum Ratings $T_C = 25°C$

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		P_C	25	W
	$T_a = 25°C$		2.0	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +150	°C

Note) *: Non-repetitive peak collector current

Internal Connection



■ Electrical Characteristics $T_C = 25°C \pm 3°C$

Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open) *1	2SD2693	V_{CEO}	I_C = 30 mA, I_B = 0	60			V
	2SD2693A			80			
Collector-base cutoff current (Emitter open)	2SD2693A	I_{CBO}	V_{CB} = 80 V, I_E = 0			100	mA
Collector-emitter cutoff current (Base open)	2SD2693	I_{CEO}	V_{CE} = 60 V, I_B = 0			100	μA
	2SD2693A		V_{CE} = 80 V, I_B = 0				
Collector-emitter cutoff current (E-B short)	2SD2693	I_{CES}	V_{CE} = 60 V, I_B = 0			100	μA
Emitter-base cutoff current (Collector open)		I_{EBO}	V_{EB} = 6 V, I_C = 0			1	mA
Forward current transfer ratio *1		h_{FE1} *2	V_{CE} = 4 V, I_C = 1 A	70		250	—
		h_{FE2}	V_{CE} = 4 V, I_C = 3 A	10			
Collector-emitter saturation voltage *1		$V_{CE(sat)}$	I_C = 3 A, I_B = 0.375 A			0.8	V
Transition frequency		f_T	V_{CE} = 10 V, I_C = 0.5 A, f = 10 MHz		30		MHz
Turn-on time		t_{on}	I_C = 1 A, Resistance loaded		0.1		μs
Storage time		t_{stg}	I_{B1} = 0.1 A, I_{B2} = − 0.1 A		2.3		μs
Fall time		t_f	V_{CC} = 50 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

This product complies with the RoHS Directive (EU 2002/95/EC).

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