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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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2SC5954

Silicon NPN triple diffusion planar type

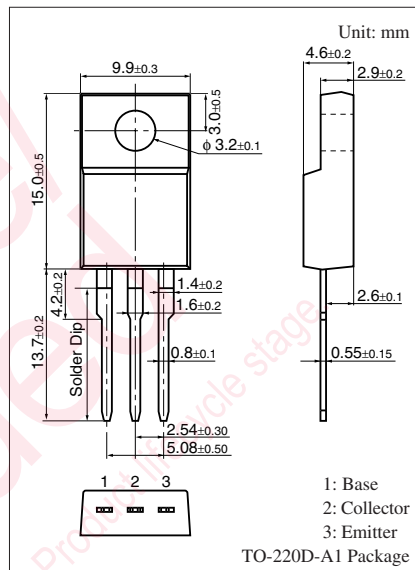
For power amplification with high forward current transfer ratio

■ Features

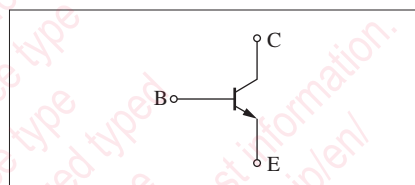
- High forward current transfer ratio h_{FE} which has satisfactory linearity.
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Full-pack package which can be installed to the heat sink with one screw.

■ Absolute Maximum Ratings $T_C = 25^\circ C$

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



Internal Connection



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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 10 \text{ mA}, I_B = 0$	60			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 80 \text{ V}, I_E = 0$			100	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 40 \text{ V}, I_B = 0$			100	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 6 \text{ V}, I_C = 0$			100	μA
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = 4 \text{ V}, I_C = 0.5 \text{ A}$	500		2300	—
	h_{FE2}	$V_{CE} = 4 \text{ V}, I_C = 3 \text{ A}$	100			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1 \text{ A}, I_B = 20 \text{ mA}$			0.6	V
Transition frequency	f_T	$V_{CE} = 10 \text{ V}, I_C = 0.1 \text{ A}, f = 10 \text{ MHz}$		200		MHz
Turn-on time	t_{on}	$I_C = 1 \text{ A}, \text{Resistance loaded}$		0.2		μs
Storage time	t_{stg}	$I_{B1} = 0.1 \text{ A}, I_{B2} = -0.1 \text{ A}$		1.5		μs
Fall time	t_f	$V_{CC} = 50 \text{ V}$		0.1		μs

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

2. *: Rank classification

Rank	Q	P
h_{FE1}	500 to 1500	1300 to 2300

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