

2SB1054

Silicon PNP triple diffusion planar type

For high power amplification

Complementary to 2SD1485

■ Features

- Excellent current I_C characteristics of forward current transfer ratio h_{FE} vs. collector
- Wide area of safe operation (ASO)
- High transition frequency f_T
- Full-pack package which can be installed to the heat sink with one screw

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

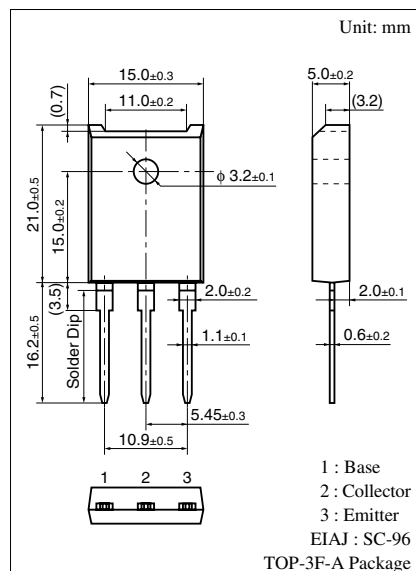
Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	-100	V
Collector to emitter voltage	V_{CEO}	-100	V
Emitter to base voltage	V_{EBO}	-5	V
Peak collector current	I_{CP}	-8	A
Collector current	I_C	-5	A
Collector power dissipation	$T_C = 25^\circ\text{C}$ $T_a = 25^\circ\text{C}$	P_C	W
		60 3	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

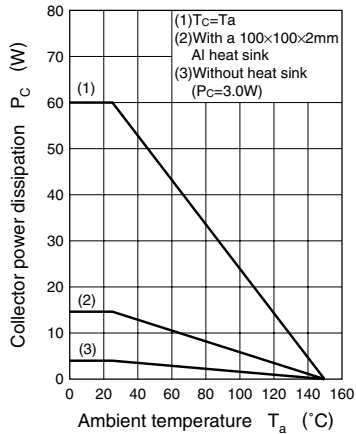
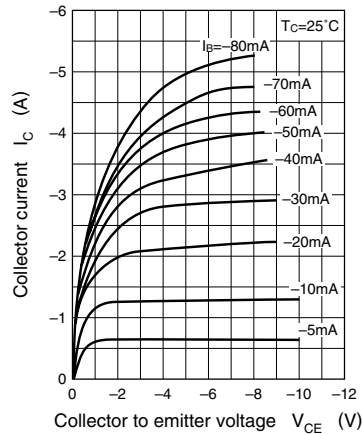
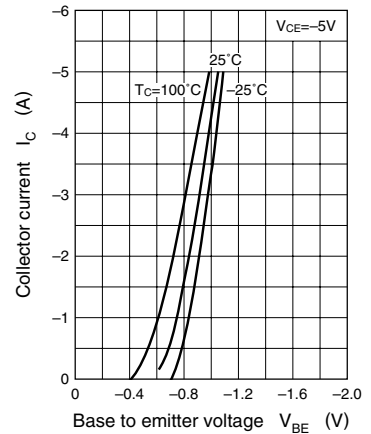
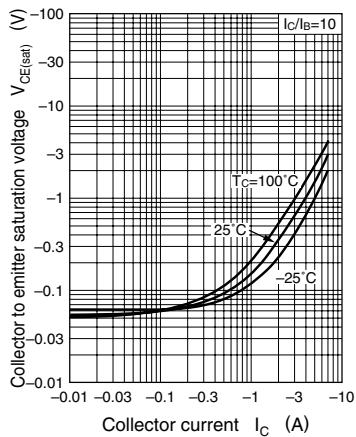
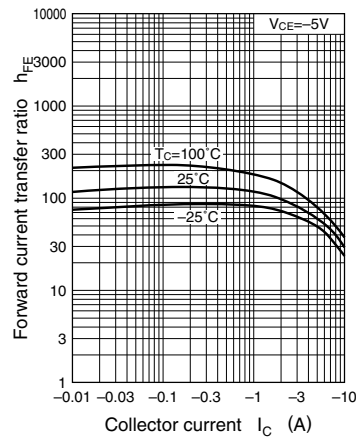
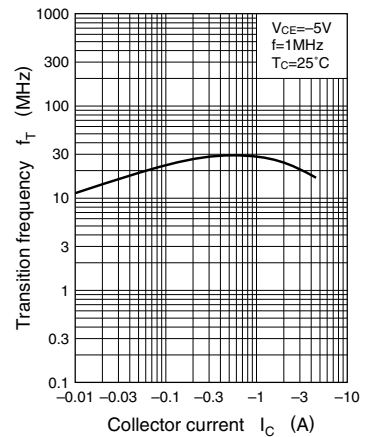
■ Electrical Characteristics $T_C = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -100\text{ V}, I_E = 0$			-50	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -3\text{ V}, I_C = 0$			-50	μA
Forward current transfer ratio	h_{FE1}	$V_{CE} = -5\text{ V}, I_C = -20\text{ mA}$	20			
	h_{FE2}^*	$V_{CE} = -5\text{ V}, I_C = -1\text{ A}$	60		200	
	h_{FE3}	$V_{CE} = -5\text{ V}, I_C = -3\text{ A}$	20			
Base to emitter voltage	V_{BE}	$V_{CE} = -5\text{ V}, I_C = -3\text{ A}$			-1.8	V
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -3\text{ A}, I_B = -0.3\text{ A}$			-0.2	V
Transition frequency	f_T	$V_{CE} = -5\text{ V}, I_C = -0.5\text{ A}, f = 1\text{ MHz}$		20		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{ V}, f = 1\text{ MHz}$		170		pF

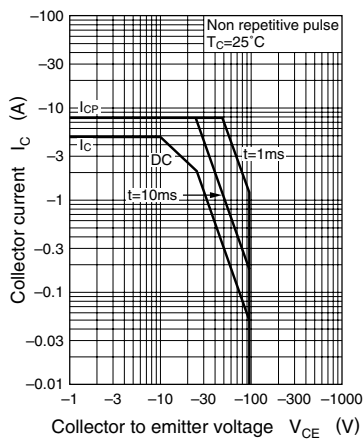
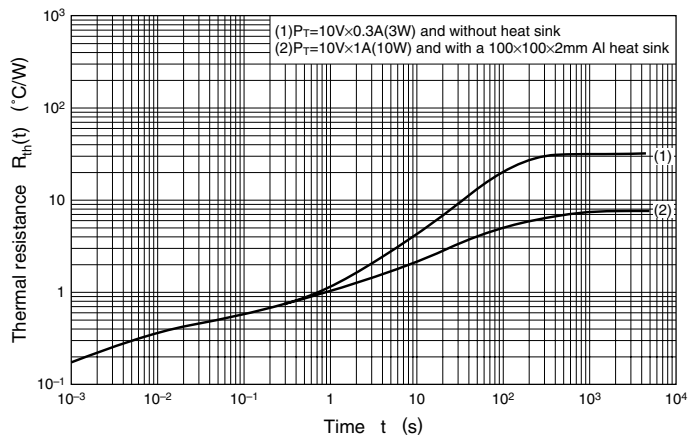
Note) *: Rank classification

Rank	Q	P
h_{FE2}	60 to 120	100 to 200



$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$ 

Area of safe operation (ASO)

 $R_{th(t)} - t$ 

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