

2SB0940, 2SB0940A (2SB940, 2SB940A)

Silicon PNP epitaxial planar type

For power amplification

For TV vertical deflection output

Complementary to 2SD1264 and 2SD1264A

■ Features

- High collector to emitter voltage V_{CE0}
- Large collector power dissipation P_C
- 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	2SB0940	-200	V	
	2SB0940A			
Collector to emitter voltage	2SB0940	-150	V	
	2SB0940A	-180		
Emitter to base voltage	V_{EBO}	-6	V	
Peak collector current	I_{CP}	-3	A	
Collector current	I_C	-2	A	
Collector power dissipation	P_C	$T_C = 25^\circ\text{C}$	30	W
		$T_a = 25^\circ\text{C}$	2	
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$	

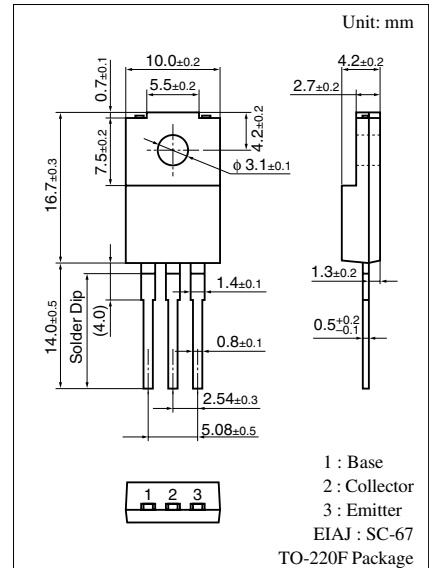
■ Electrical Characteristics $T_C = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -200\text{ V}, I_E = 0$			-50	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -4\text{ V}, I_C = 0$			-50	μA
Collector to base voltage	V_{CBO}	$I_C = -50\ \mu\text{A}, I_E = 0$	-200			V
Collector to emitter voltage	V_{CEO}	2SB0940	-150			V
		2SB0940A	-180			
Emitter to base voltage	V_{EBO}	$I_E = -500\ \mu\text{A}, I_C = 0$	-6			V
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = -10\text{ V}, I_C = -150\text{ mA}$	60		240	
	h_{FE2}	$V_{CE} = -10\text{ V}, I_C = -400\text{ mA}$	50			
Base to emitter voltage	V_{BE}	$V_{CE} = -10\text{ V}, I_C = -400\text{ mA}$			-1	V
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{ mA}, I_B = -50\text{ mA}$			-1	V
Transition frequency	f_T	$V_{CE} = -10\text{ V}, I_C = -0.5\text{ A}, f = 10\text{ MHz}$		30		MHz

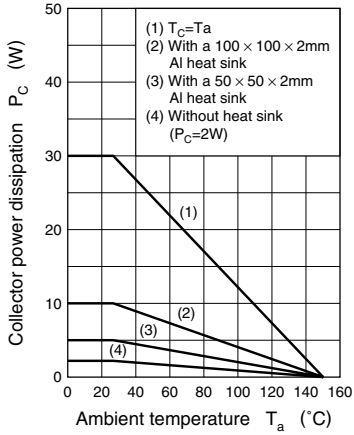
Note) *: Rank classification

Rank	Q	P
h_{FE1}	60 to 140	100 to 240

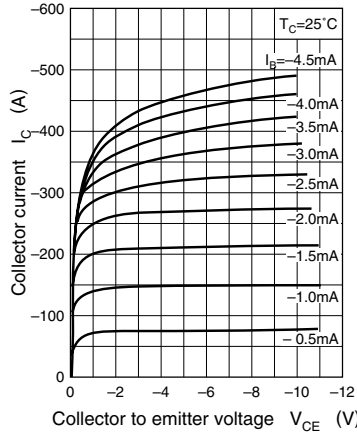
Note.) The Part numbers in the Parenthesis show conventional part number.



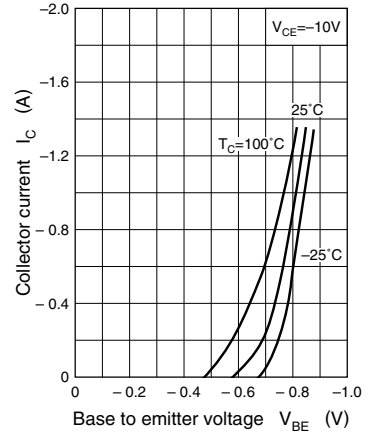
$P_C - T_a$



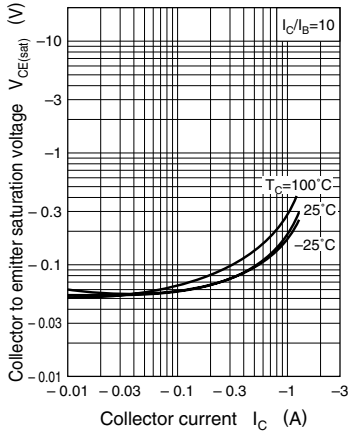
$I_C - V_{CE}$



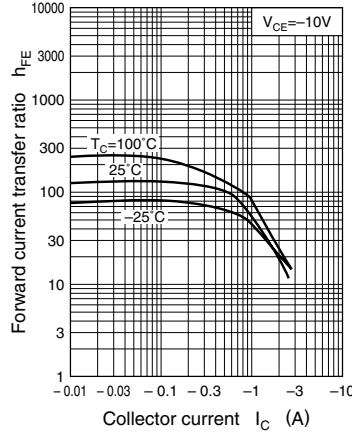
$I_C - V_{BE}$



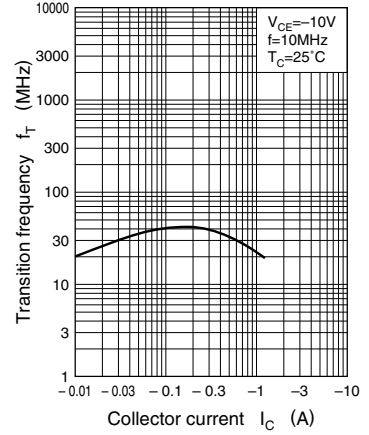
$V_{CE(sat)} - I_C$



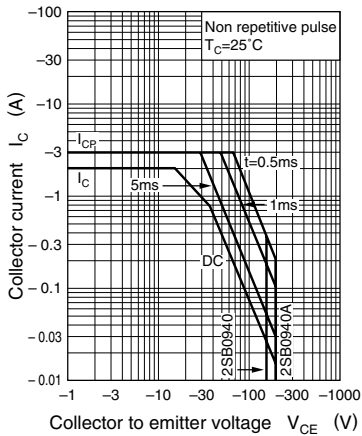
$h_{FE} - I_C$



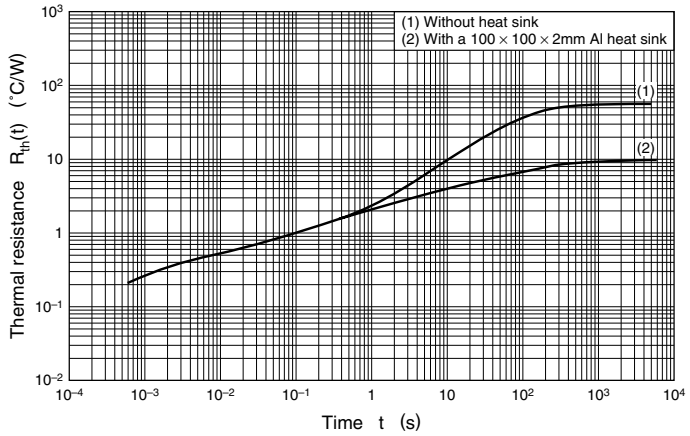
$f_T - I_C$



Area of safe operation (ASO)



$R_{th(t)} - t$



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