

# 2SB940, 2B940A

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 ( $T_C=25^\circ\text{C}$ )

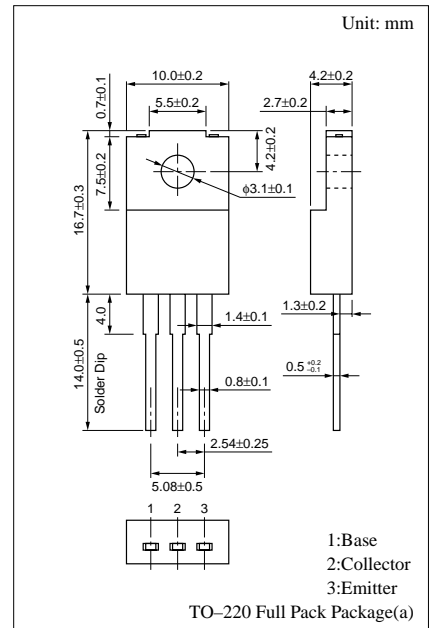
Parameter	Symbol	Rated	Unit
Collector to base voltage	$V_{CBO}$	-200	V
2SB940A		-200	
Collector to emitter voltage	$V_{CEO}$	-150	V
2SB940A		-180	
Emitter to base voltage	$V_{EBO}$	-6	V
Peak collector current	$I_{CP}$	-3	A
Collector current	$I_C$	-2	A
Collector power dissipation	$P_C$	30	W
$T_C=25^\circ\text{C}$ $T_a=25^\circ\text{C}$		2	
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

## Electrical Characteristics ( $T_C=25^\circ\text{C}$ )

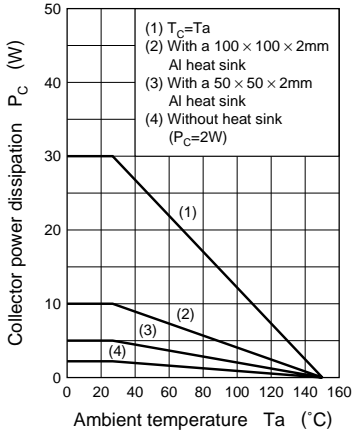
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -200\text{V}, I_E = 0$			-50	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -4\text{V}, I_C = 0$			-50	$\mu\text{A}$
Collector to base voltage	$V_{CBO}$	$I_C = -50\mu\text{A}, I_E = 0$	-200			V
Collector to emitter voltage	$V_{CEO}$	$I_C = -5\text{mA}, I_B = 0$	-150			V
			-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

\* $h_{FE1}$  Rank classification

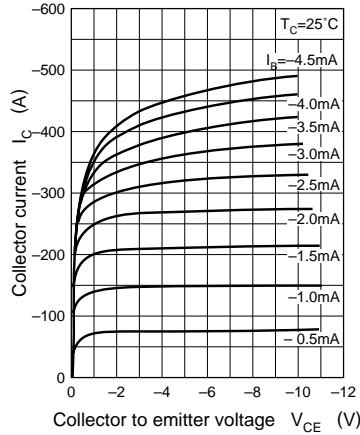
Rank	Q	P
$h_{FE1}$	60 to 140	100 to 240



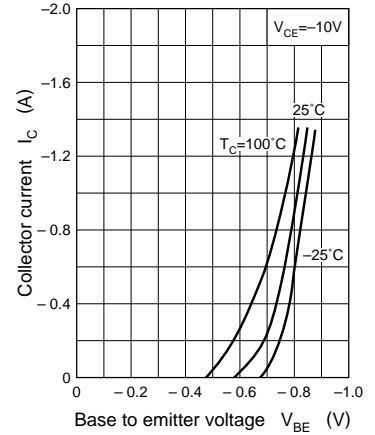
$P_C - T_a$



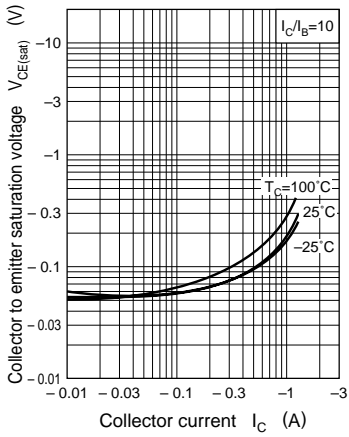
$I_C - V_{CE}$



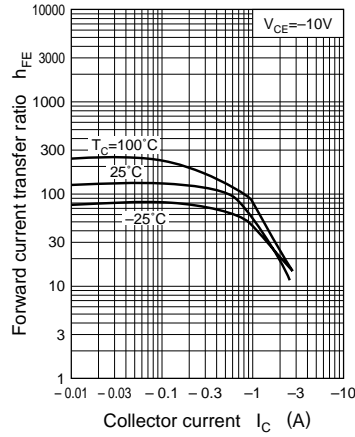
$I_C - V_{BE}$



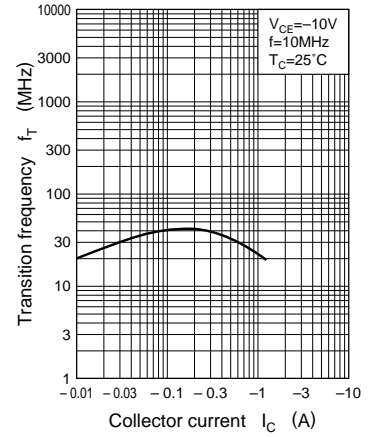
$V_{CE(sat)} - I_C$



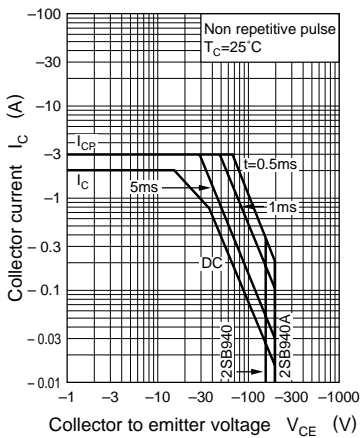
$h_{FE} - I_C$



$f_T - I_C$



Area of safe operation (ASO)



$R_{th(t)} - t$

