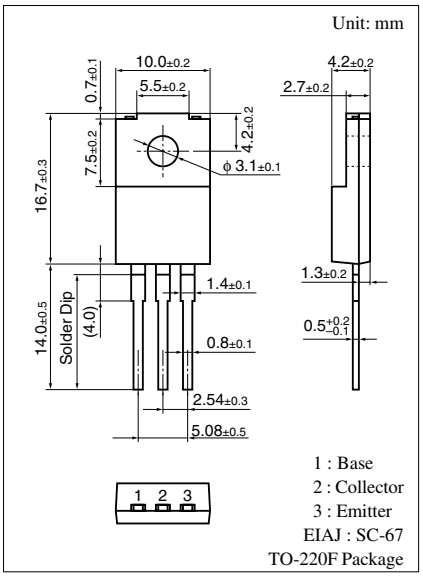
2SB0940, 2SB0940A (2SB940, 2SB940A)

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_{CEO}
- Large collector power dissipation P_C
- Full-pack package which can be installed to the heat sink with one screw

■ Absolute Maximum Ratings $T_C = 25°C$

Parameter		Symbol	Rating	Unit
Collector to base voltage	2SB0940	V_{CBO}	−200	V
	2SB0940A		−200	
Collector to emitter voltage	2SB0940	V_{CEO}	−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	$T_C = 25°C$	P_C	30	W
	$T_a = 25°C$		2	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_C = 25°C$

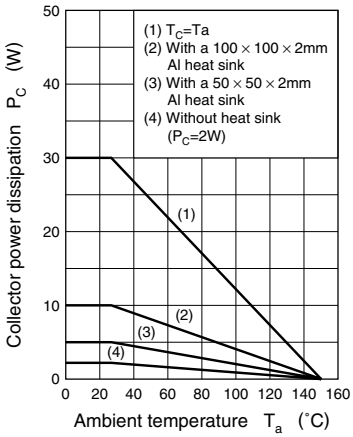
Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current		I_{CBO}	$V_{CB} = -200$ V, $I_E = 0$			−50	μA
Emitter cutoff current		I_{EBO}	$V_{EB} = -4$ V, $I_C = 0$			−50	μA
Collector to base voltage		V_{CBO}	$I_C = -50$ μA, $I_E = 0$	−200			V
Collector to emitter voltage	2SB0940	V_{CEO}	$I_C = -5$ mA, $I_B = 0$	−150			V
	2SB0940A			−180			
Emitter to base voltage		V_{EBO}	$I_E = -500$ μA, $I_C = 0$	−6			V
Forward current transfer ratio		h_{FE1} *	$V_{CE} = -10$ V, $I_C = -150$ mA	60		240	
		h_{FE2}	$V_{CE} = -10$ V, $I_C = -400$ mA	50			
Base to emitter voltage		V_{BE}	$V_{CE} = -10$ V, $I_C = -400$ mA			−1	V
Collector to emitter saturation voltage		$V_{CE(sat)}$	$I_C = -500$ mA, $I_B = -50$ mA			−1	V
Transition frequency		f_T	$V_{CE} = -10$ V, $I_C = -0.5$ A, f = 10 MHz		30		MHz

Note) ∗: Rank classification

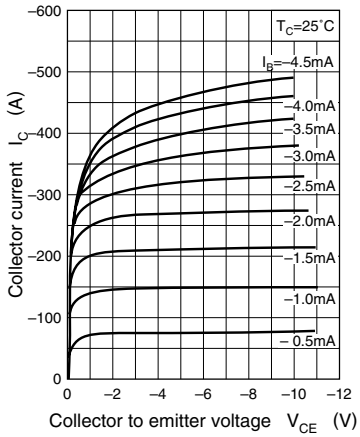
Rank	Q	P
h_{FE1}	60 to 140	100 to 240

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

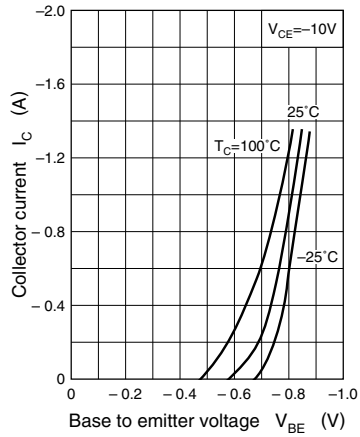
P_C — T_a



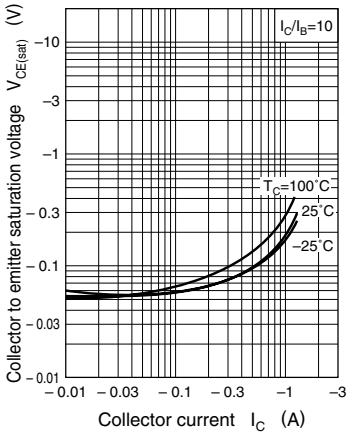
I_C — V_{CE}



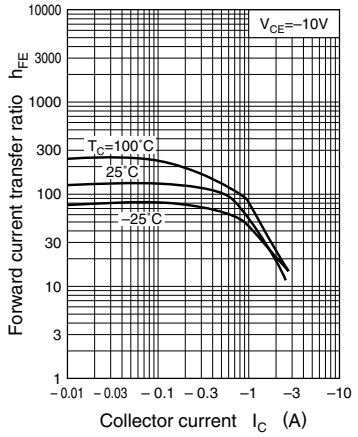
I_C — V_{BE}



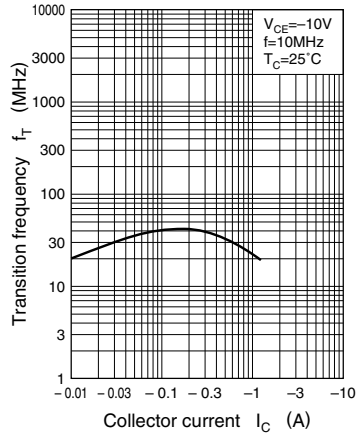
$V_{CE(sat)}$ — I_C



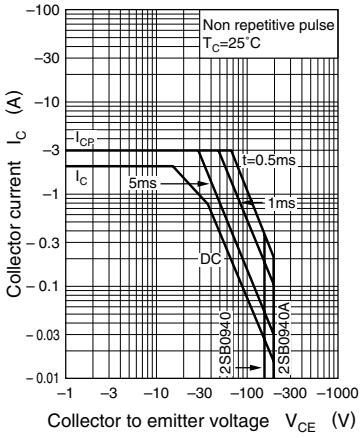
h_{FE} — I_C



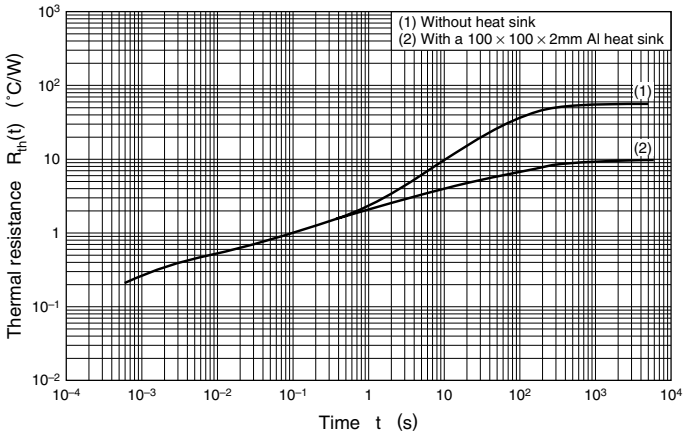
f_T — I_C



Area of safe operation (ASO)



$R_{th(t)}$ — t



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