

2SB766, 2SB766A

Silicon PNP epitaxial planer type

For low-frequency output amplification

Complementary to 2SD874 and 2SD874A

Features

- Large collector power dissipation P_C .
- Mini Power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	2SB766	V_{CBO}	V
	2SB766A		
Collector to emitter voltage	2SB766	V_{CEO}	V
	2SB766A		
Emitter to base voltage	V_{EBO}	-5	V
Peak collector current	I_{CP}	-1.5	A
Collector current	I_C	-1	A
Collector power dissipation	P_C^*	1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

* Printed circuit board: Copper foil area of 1cm^2 or more, and the board thickness of 1.7mm for the collector portion

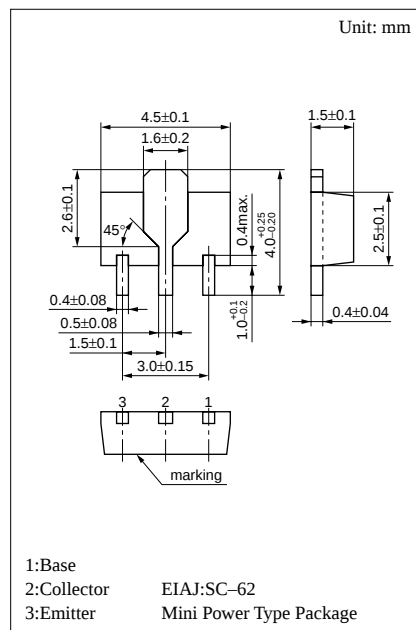
Electrical Characteristics ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -20\text{V}, I_E = 0$			-0.1	μA
Collector to base voltage	2SB766	V_{CBO}	$I_C = -10\mu\text{A}, I_E = 0$	-30		V
	2SB766A			-60		
Collector to emitter voltage	2SB766	V_{CEO}	$I_C = -2\text{mA}, I_B = 0$	-25		V
	2SB766A			-50		
Emitter to base voltage	V_{EBO}	$I_E = -10\mu\text{A}, I_C = 0$	-5			V
Forward current transfer ratio	h_{FE1}^{*1}	$V_{CE} = -10\text{V}, I_C = -500\text{mA}^{*2}$	85		340	
	h_{FE2}	$V_{CE} = -5\text{V}, I_C = -1\text{A}^{*2}$	50			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}^{*2}$		-0.2	-0.4	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}^{*2}$		-0.85	-1.2	V
Transition frequency	f_T	$V_{CB} = -10\text{V}, I_E = 50\text{mA}, f = 200\text{MHz}$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		20	30	pF

^{*1} h_{FE1} Rank classification

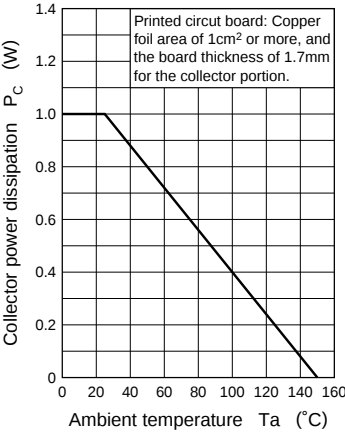
^{*2} Pulse measurement

Rank	Q	R	S
h_{FE1}	85 ~ 170	120 ~ 240	170 ~ 340
Marking	2SB766	AQ	AR
Symbol	2SB766A	BQ	BR

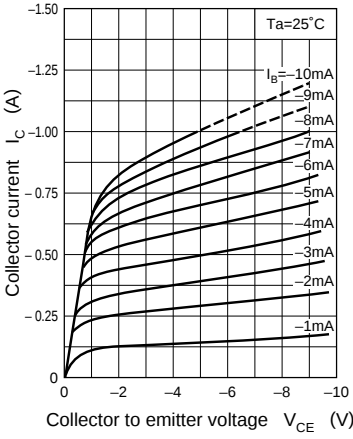


Marking symbol : A(2SB766)
B(2SB766A)

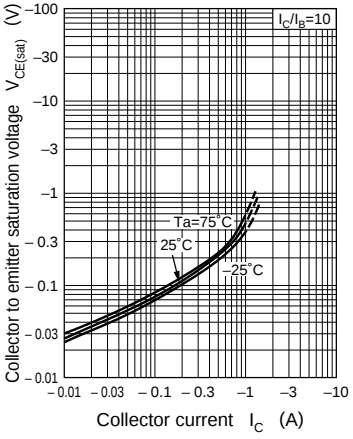
$P_C - T_a$



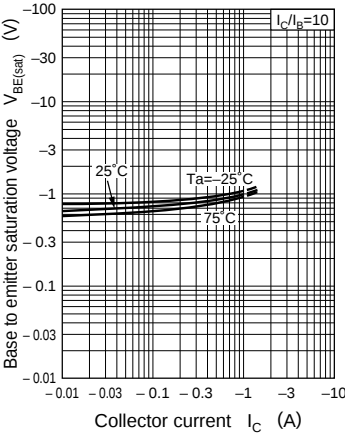
$I_C - V_{CE}$



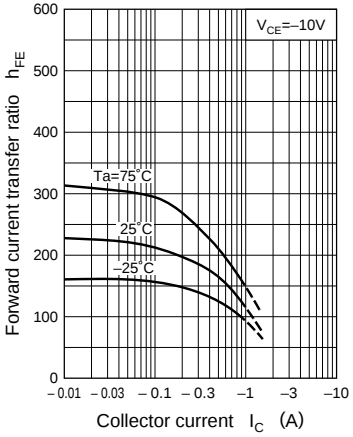
$V_{CE(sat)} - I_C$



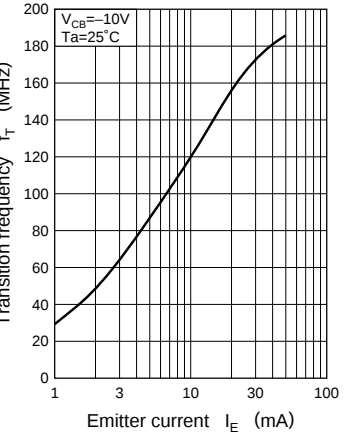
$V_{BE(sat)} - I_C$



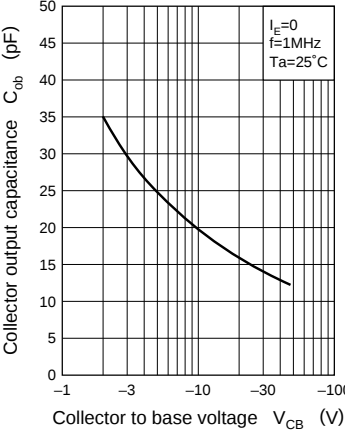
$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$



Area of safe operation (ASO)

