

2SB0766, 2SB0766A (2SB766, 2SB766A)

Silicon PNP epitaxial planar type

For low-frequency output amplification

Complementary to 2SD0874 (2SD874) and 2SD0874A (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 (Ta=25°C)

Parameter	Symbol	Rated	Unit
Collector to base voltage	2SB0766	-30	V
	2SB0766A	-60	
Collector to emitter voltage	2SB0766	-25	V
	2SB0766A	-50	
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	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

* Printed circuit board: Copper foil area of 1cm² or more, and the board thickness of 1.7mm for the collector portion

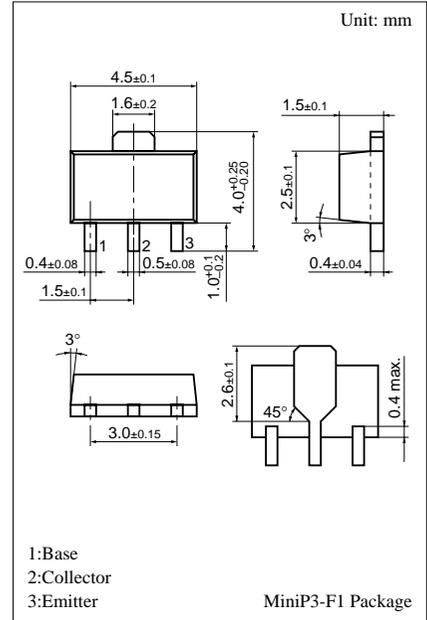
Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -20V, I_E = 0$			-0.1	μA
Collector to base voltage	2SB0766	$I_C = -10\mu A, I_E = 0$	-30			V
	2SB0766A		-60			
Collector to emitter voltage	2SB0766	$I_C = -2mA, I_B = 0$	-25			V
	2SB0766A		-50			
Emitter to base voltage	V_{EBO}	$I_E = -10\mu A, I_C = 0$	-5			V
Forward current transfer ratio	h_{FE1}^{*1}	$V_{CE} = -10V, I_C = -500mA^{*2}$	85		340	
	h_{FE2}	$V_{CE} = -5V, I_C = -1A^{*2}$	50			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA^{*2}$		-0.2	-0.4	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500mA, I_B = -50mA^{*2}$		-0.85	-1.2	V
Transition frequency	f_T	$V_{CB} = -10V, I_E = 50mA, f = 200MHz$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		20	30	pF

*1 h_{FE1} Rank classification

Rank	Q	R	S
h_{FE1}	85 ~ 170	120 ~ 240	170 ~ 340
Marking Symbol	2SB0766	AQ	AR
	2SB0766A	BQ	BR

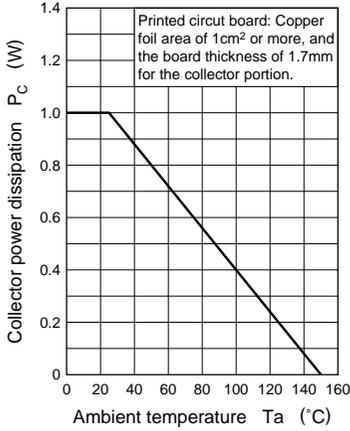
*2 Pulse measurement



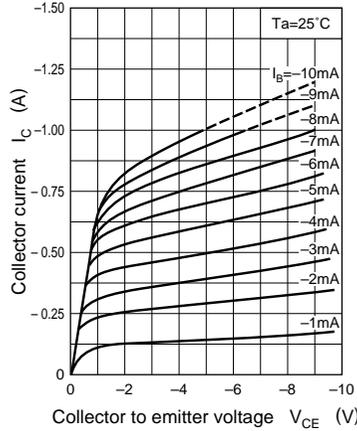
Marking symbol : A(2SB0766)
B(2SB0766A)

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

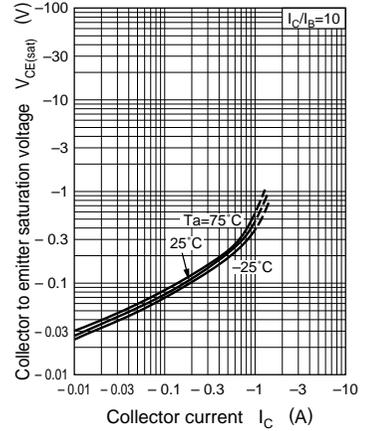
$P_C - T_a$



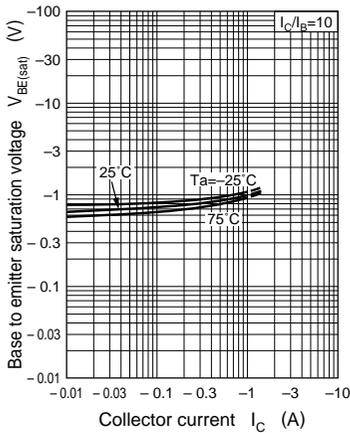
$I_C - V_{CE}$



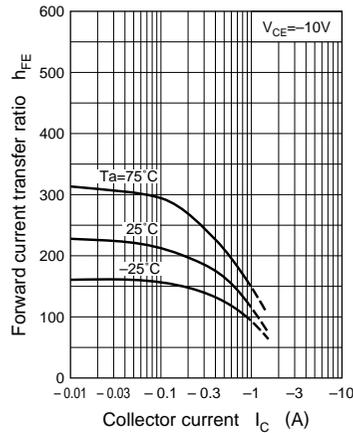
$V_{CE(sat)} - I_C$



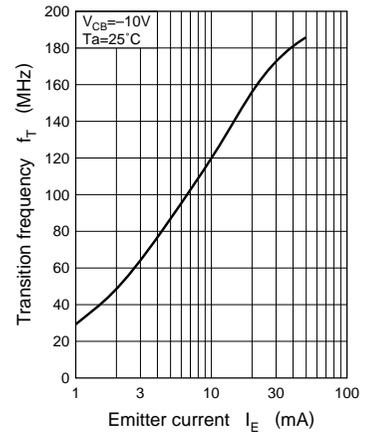
$V_{BE(sat)} - I_C$



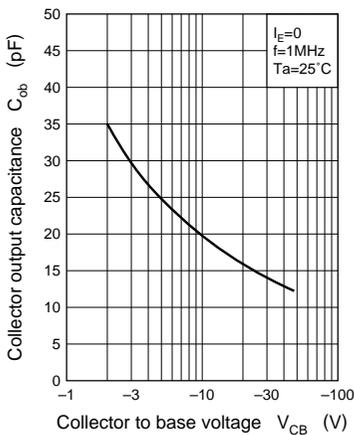
$h_{FE} - I_C$



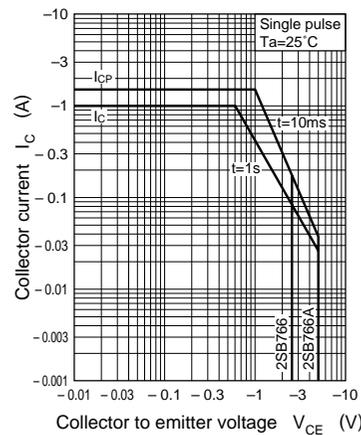
$f_T - I_E$



$C_{ob} - V_{CB}$



Area of safe operation (ASO)



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