

# 2SB1070, 2SB1070A

## Silicon PNP epitaxial planar type

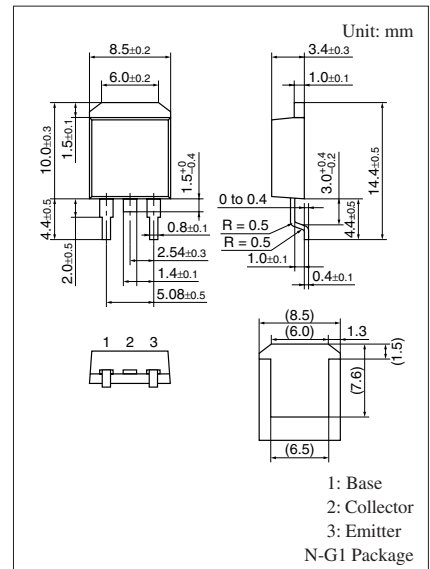
### For low-voltage switching

## ■ Features

- Low collector-emitter saturation voltage  $V_{CE(sat)}$
- High-speed switching
- N type package enabling direct soldering of the radiating fin to the printed circuit board, etc. of small electronic equipment

■ Absolute Maximum Ratings  $T_C = 25^\circ\text{C}$

Parameter		Symbol	Rating	Unit
Collector-base voltage (Emitter open)	2SB1070	$V_{CBO}$	-40	V
	2SB1070A		-50	
Collector-emitter voltage (Base open)	2SB1070	$V_{CEO}$	-20	V
	2SB1070A		-40	
Emitter-base voltage (Collector open)		$V_{EBO}$	-5	V
Collector current		$I_C$	-4	A
Peak collector current		$I_{CP}$	-8	A
Collector power dissipation <div style="text-align: right;"><math>T_a = 25^\circ\text{C}</math></div>		$P_C$	25	W
			1.3	
Junction temperature		$T_j$	150	$^\circ\text{C}$
Storage temperature		$T_{stg}$	-55 to +150	$^\circ\text{C}$



Note) Self-supported type package is also prepared.

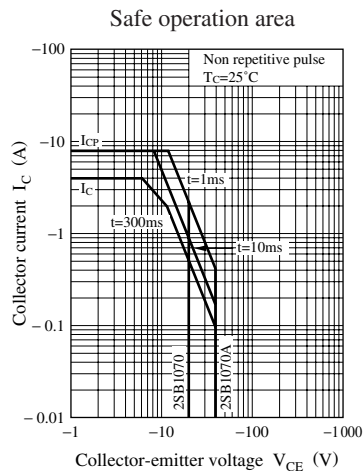
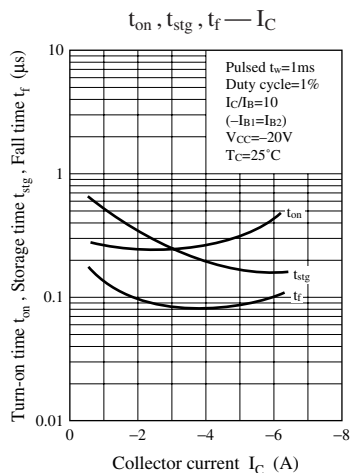
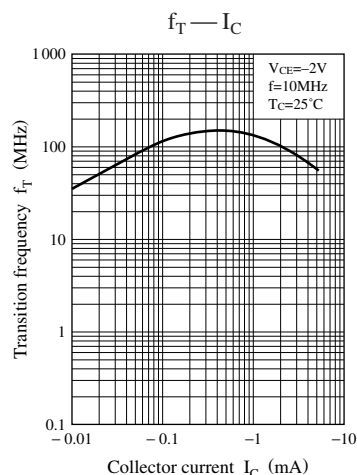
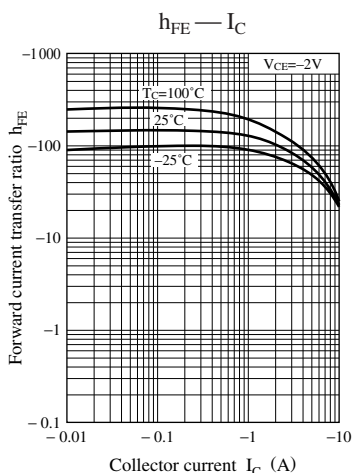
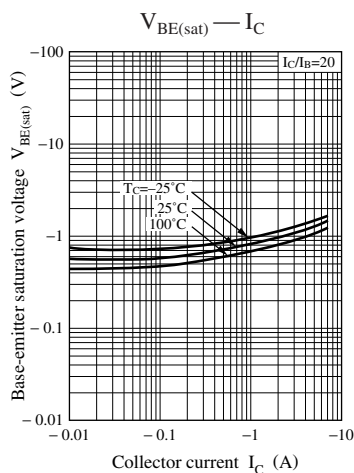
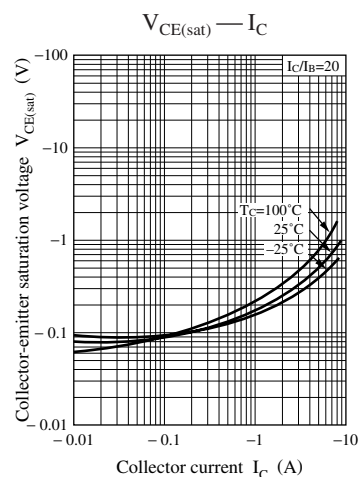
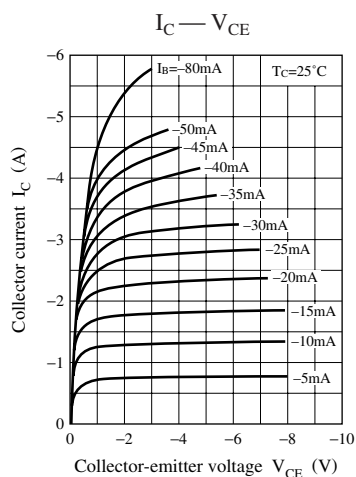
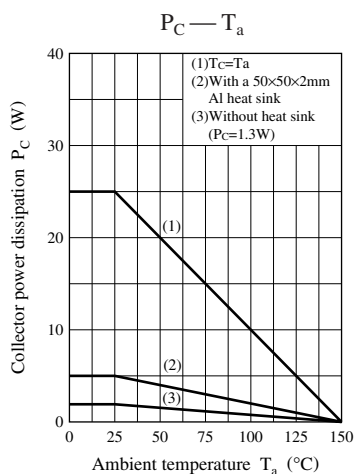
### ■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

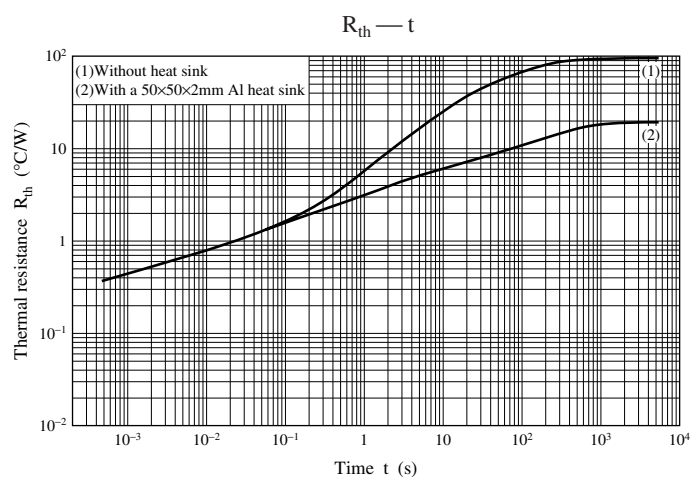
Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	2SB1070	$V_{CEO}$	$I_C = -10\text{ mA}, I_B = 0$	-20			V
	2SB1070A			-40			
Collector-base cutoff current (Emitter open)	2SB1070	$I_{CBO}$	$V_{CB} = -40\text{ V}, I_E = 0$			-50	$\mu\text{A}$
	2SB1070A		$V_{CB} = -50\text{ V}, I_E = 0$			-50	
Emitter-base cutoff current (Collector open)		$I_{EBO}$	$V_{EB} = -5\text{ V}, I_C = 0$			-50	$\mu\text{A}$
Forward current transfer ratio	$h_{FE1}$		$V_{CE} = -2\text{ V}, I_C = -0.1\text{ A}$	45			—
	$h_{FE2}^*$		$V_{CE} = -2\text{ V}, I_C = -1\text{ A}$	90		260	
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = -2\text{ A}, I_B = -0.1\text{ A}$			-1.5	V
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = -2\text{ A}, I_B = -0.1\text{ A}$			-0.5	V
Transition frequency		$f_T$	$V_{CE} = -5\text{ V}, I_C = -0.5\text{ A}, f = 10\text{ MHz}$		150		MHz
Turn-on time		$t_{on}$	$I_C = -2\text{ A}$		0.3		$\mu\text{s}$
Storage time		$t_{stg}$	$I_{B1} = -0.2\text{ A}, I_{B2} = 0.2\text{ A}$		0.4		$\mu\text{s}$
Fall time		$t_f$	$V_{CC} = -20\text{ V}$		0.1		$\mu\text{s}$

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

## 2. \*: Rank classification

Rank	Q	P
$h_{FE2}$	90 to 180	130 to 260





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