

2SB1071, 2SB1071A

Silicon PNP epitaxial planar type

For low-voltage switching

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- High-speed switching
- 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	Rating	Unit
Collector-base voltage (Emitter open)	2SB1071 V_{CBO}	-40	V
	2SB1071A	-50	
Collector-emitter voltage (Base open)	2SB1071 V_{CEO}	-20	V
	2SB1071A	-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	P_C	25	W
		$T_a = 25^\circ\text{C}$ 2	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

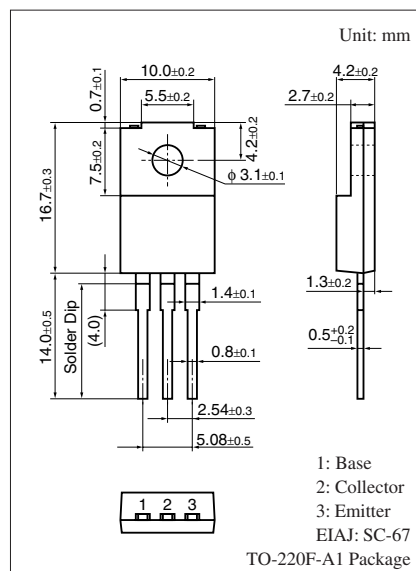
■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

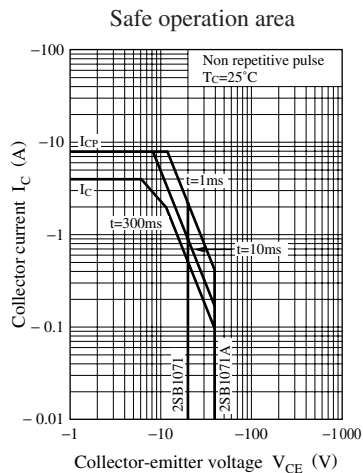
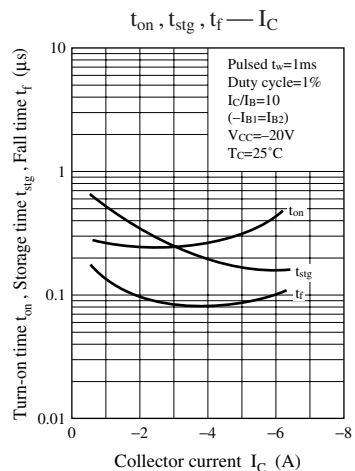
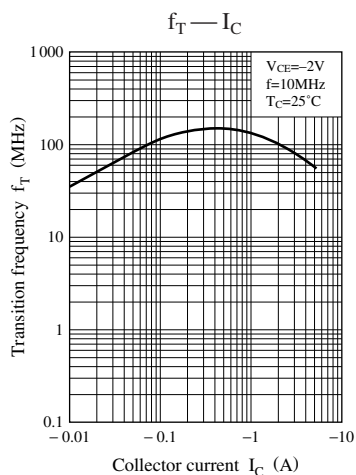
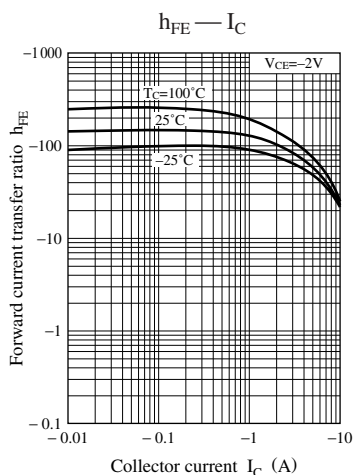
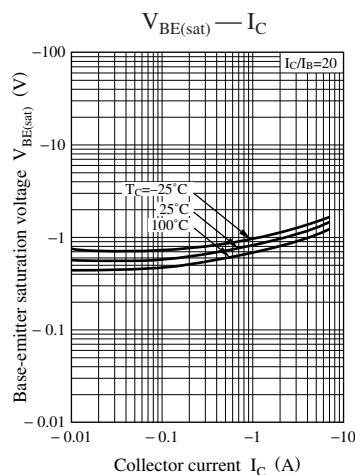
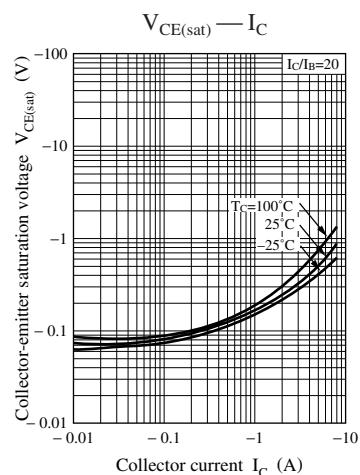
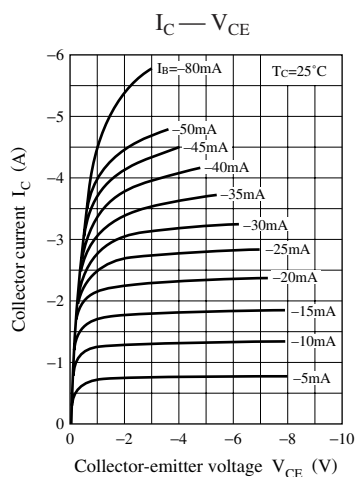
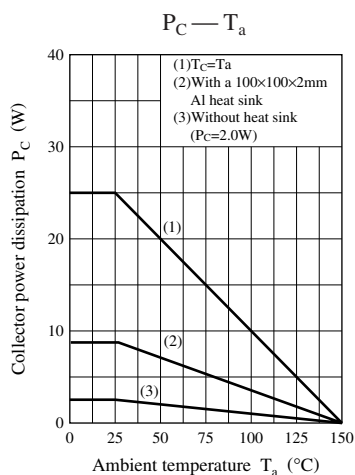
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	2SB1071 V_{CEO}	$I_C = -10\text{ mA}, I_B = 0$	-20			V
	2SB1071A		-40			
Collector-base cutoff current (Emitter open)	2SB1071 I_{CBO}	$V_{CB} = -40\text{ V}, I_E = 0$			-50	μA
	2SB1071A	$V_{CB} = -50\text{ V}, I_E = 0$			-50	
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = -5\text{ V}, I_C = 0$			-50	μA
Forward current transfer ratio	h_{FE1}	$V_{CE} = -2\text{ V}, I_C = -0.1\text{ A}$	45			—
	h_{FE2}^*	$V_{CE} = -2\text{ V}, I_C = -1\text{ A}$	60		260	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2\text{ A}, I_B = -0.1\text{ A}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2\text{ A}, I_B = -0.1\text{ A}$			-1.5	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}	$I_C = -2\text{ A}, I_{B1} = -0.2\text{ A}, I_{B2} = 0.2\text{ A}$		0.3		μs
Storage time	t_{stg}	$V_{CC} = -20\text{ V}$		0.4		μs
Fall time	t_f			0.1		μs

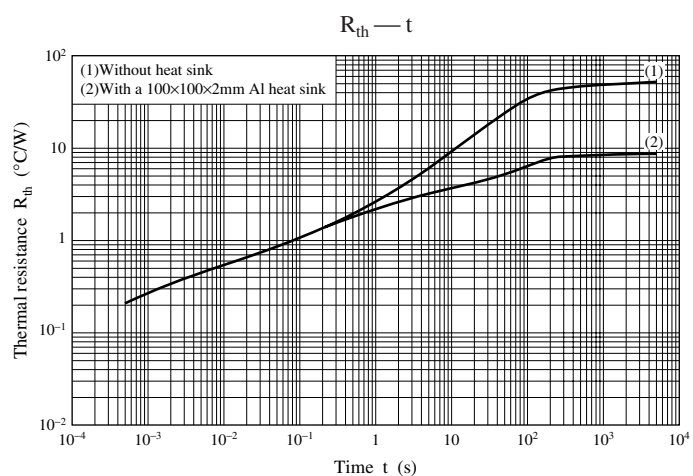
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Rank classification

Rank	R	Q	P
h_{FE2}	60 to 120	90 to 180	130 to 260







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