

# 2SB0951 (2SB951), 2SB0951A (2SB951A)

## Silicon PNP epitaxial planar type darlington

For midium-speed switching

Complementary to 2SD1277 and 2SD1277A

### ■ Features

- High forward current transfer ratio  $h_{FE}$
- 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)	2SB0951	-60	V
	2SB0951A	-80	
Collector-emitter voltage (Base open)	2SB0951	-60	V
	2SB0951A	-80	
Emitter-base voltage (Collector open)	$V_{EBO}$	-7	V
Collector current	$I_C$	-8	A
Peak collector current	$I_{CP}$	-12	A
Collector power dissipation	$P_C$	45	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 $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

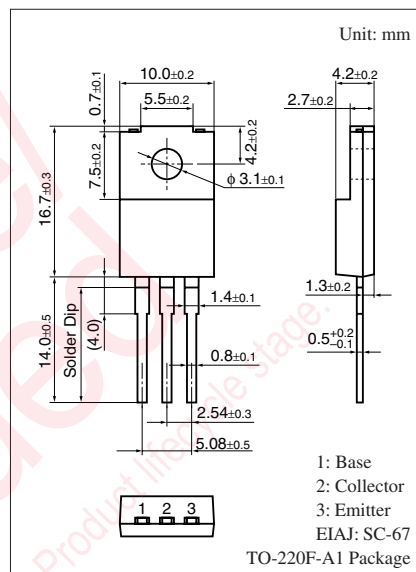
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	2SB0951	$I_C = -30\text{ mA}, I_B = 0$	-60			V
	2SB0951A		-80			
Collector-base cutoff current (Emitter open)	2SB0951	$V_{CB} = -60\text{ V}, I_E = 0$			-100	$\mu\text{A}$
	2SB0951A		$V_{CB} = -80\text{ V}, I_E = 0$		-100	
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = -7\text{ V}, I_C = 0$			-2	mA
Forward current transfer ratio	$h_{FE1}^*$	$V_{CE} = -3\text{ V}, I_C = -4\text{ A}$	1000		10000	—
	$h_{FE2}$	$V_{CE} = -3\text{ V}, I_C = -8\text{ A}$	500			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -4\text{ A}, I_B = -8\text{ mA}$			-1.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -4\text{ A}, I_B = -8\text{ mA}$			-2.0	V
Transition frequency	$f_T$	$V_{CE} = -10\text{ V}, I_C = -1\text{ A}, f = 1\text{ MHz}$		20		MHz
Turn-on time	$t_{on}$	$I_C = -4\text{ A}, I_{B1} = -8\text{ mA}, I_{B2} = 8\text{ mA}$		0.5		$\mu\text{s}$
Storage time	$t_{stg}$	$V_{CC} = -50\text{ V}$		2.0		$\mu\text{s}$
Fall time	$t_f$			1.0		$\mu\text{s}$

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

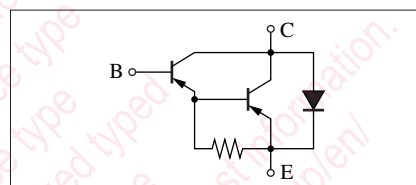
2. \*: Rank classification

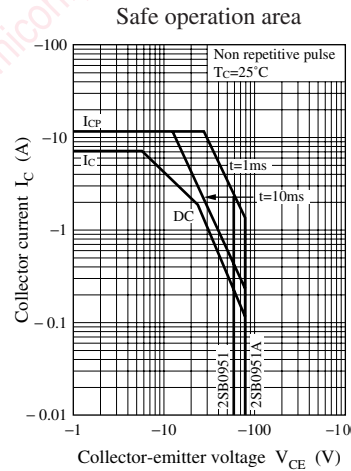
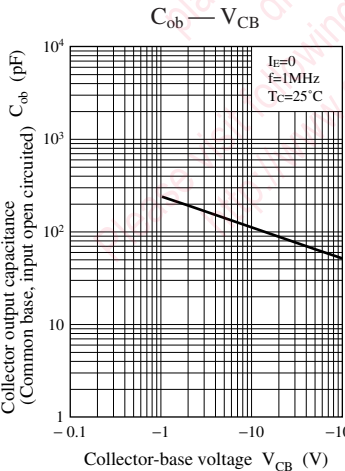
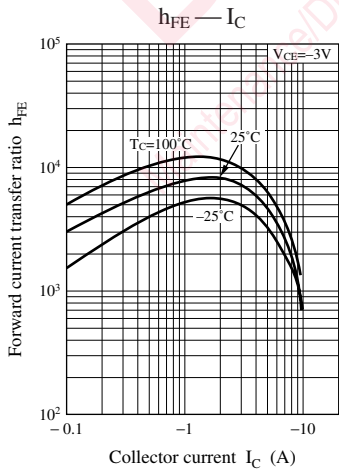
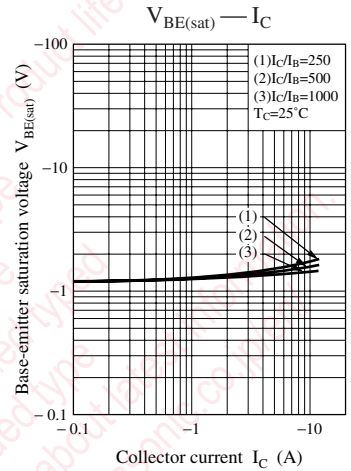
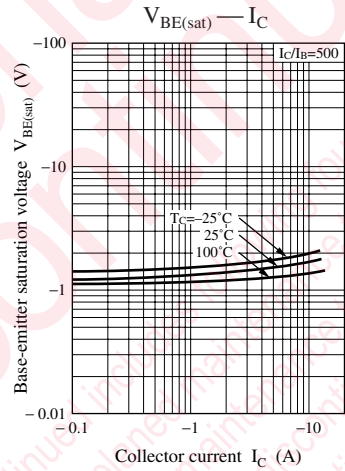
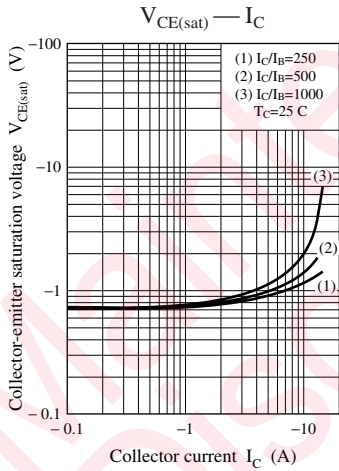
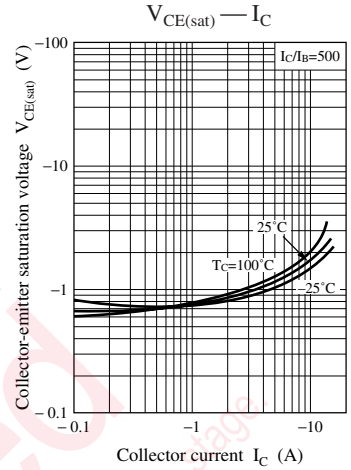
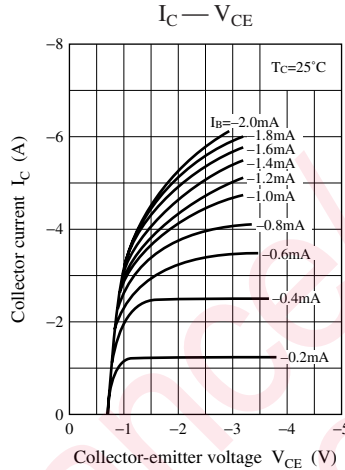
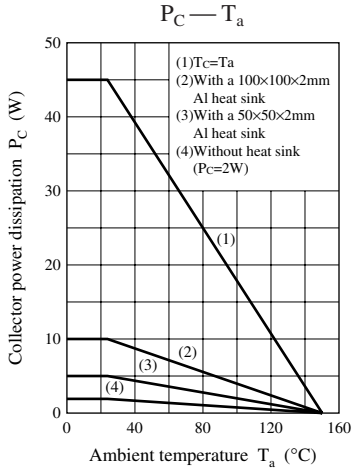
Rank	R	Q	P
$h_{FE1}$	1000 to 2500	2000 to 5000	4000 to 10000

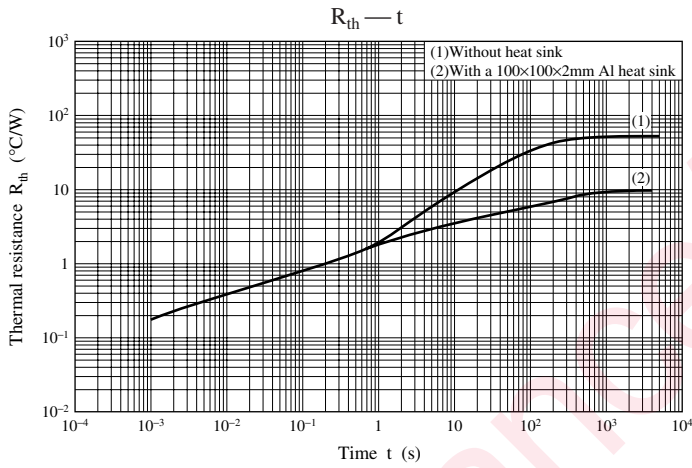
Note) The part numbers in the parenthesis show conventional part number.



### Internal Connection







Maintenance/Discontinued includes following four Product lifecycle stage.  
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planned discontinued type  
discontinued type  
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