

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	V_{CBO}	-60	V
	2SB0951A		-80	
Collector-emitter voltage (Base open)	2SB0951	V_{CEO}	-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		P_C	45	W
dissipation	$T_a = 25^{\circ}\text{C}$		2	
Junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature		T_{stg}	-55 to +150	$^{\circ}\text{C}$

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

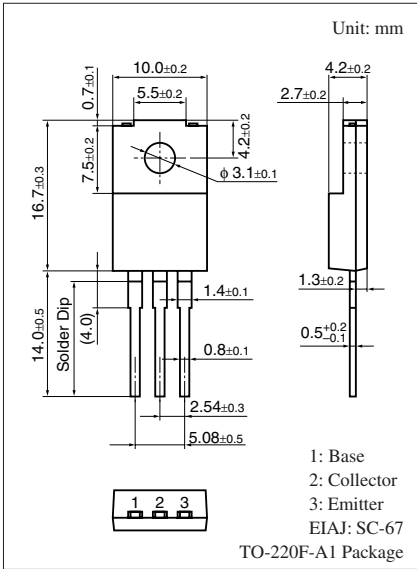
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	2SB0951 2SB0951A	V_{CEO}	$I_C = -30 \text{ mA}, I_B = 0$	-60		V
				-80		
Collector-base cutoff current (Emitter open)	2SB0951 2SB0951A	I_{CBO}	$V_{CB} = -60 \text{ V}, I_E = 0$		-100	μA
			$V_{CB} = -80 \text{ V}, I_E = 0$		-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}^* h_{FE2}	$V_{CE} = -3 \text{ V}, I_C = -4 \text{ A}$	1000		10000	—
		$V_{CE} = -3 \text{ V}, I_C = -8 \text{ A}$	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		μs
Storage time	t_{stg}	$V_{CC} = -50 \text{ V}$		2.0		μs
Fall time	t_f			1.0		μs

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

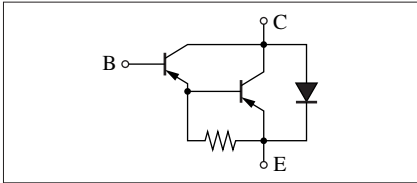
2. *: Rank classification

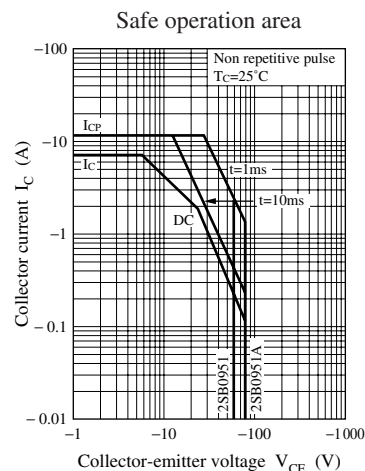
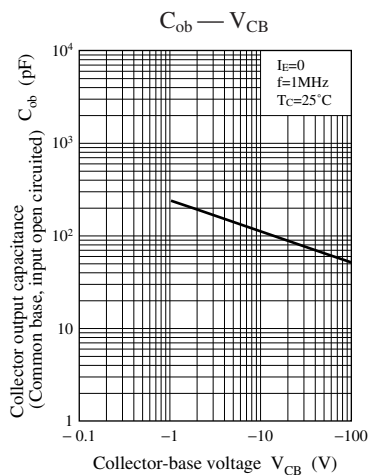
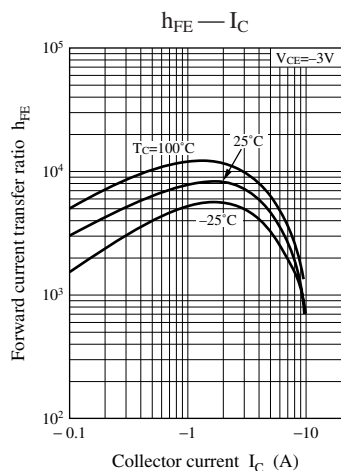
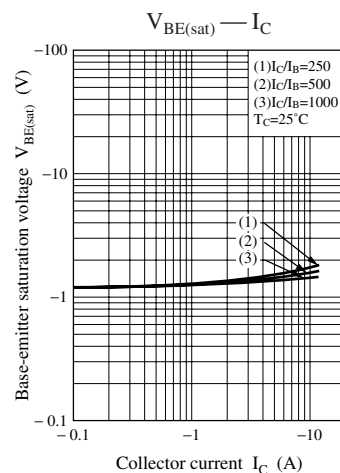
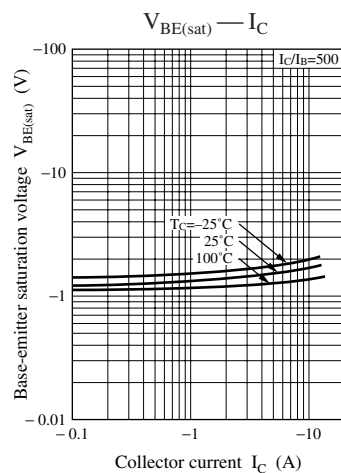
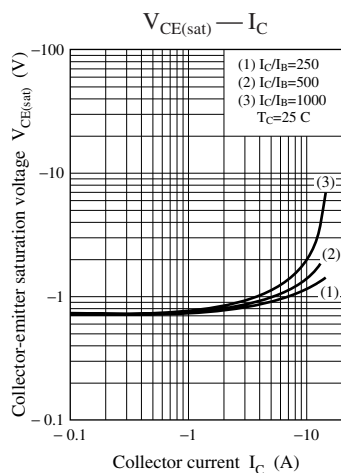
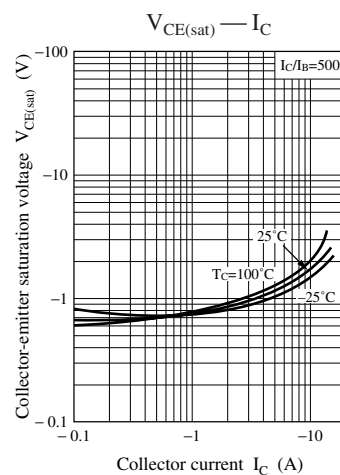
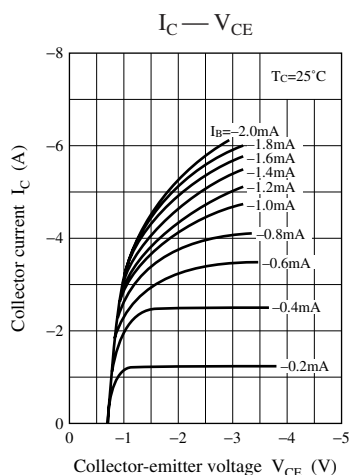
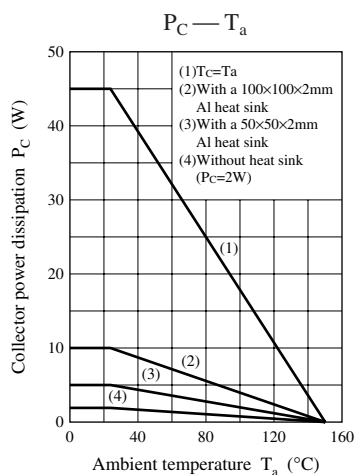
Rank	R	Q	P
h_{FE1}	1000 to 2500	2000 to 5000	4000 to 10000

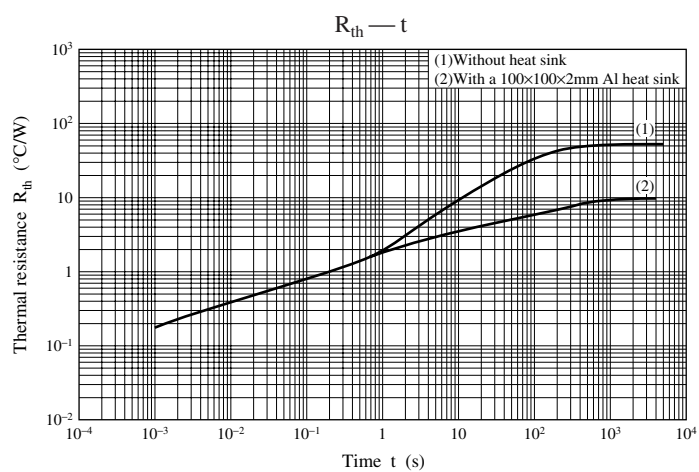
Note) The part numbers in the parenthesis show conventional part number.



Internal Connection







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