

2SB0949 (2SB949), 2SB0949A (2SB949A)

Silicon PNP epitaxial planar type darlington

For power amplification and switching
Complementary to 2SD1275 and 2SD1275A

■ 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 $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	2SB0949	V_{CBO}	-60	V
	2SB0949A		-80	
Collector-emitter voltage (Base open)	2SB0949	V_{CEO}	-60	V
	2SB0949A		-80	
Emitter-base voltage (Collector open)	V_{EBO}	-5	V	
Collector current	I_C	-2	A	
Peak collector current	I_{CP}	-4	A	
Collector power dissipation	$T_C = 25^\circ\text{C}$	P_C	35	W
			2	
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$	

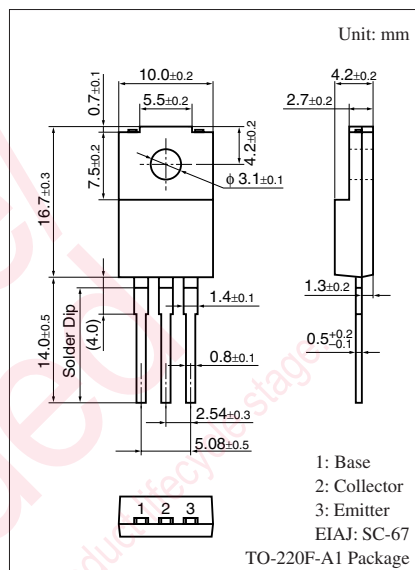
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	2SB0949	$I_C = -30\text{ mA}, I_B = 0$	-60			V
	2SB0949A		-80			
Base-emitter voltage	V_{BE}	$V_{CE} = -4\text{ V}, I_C = -2\text{ A}$			-2.8	V
Collector-base cutoff current (Emitter open)	2SB0949	$V_{CB} = -60\text{ V}, I_E = 0$			-1	mA
	2SB0949A	$V_{CB} = -80\text{ V}, I_E = 0$			-1	
Collector-emitter cutoff current (Base open)	2SB0949	$V_{CE} = -30\text{ V}, I_B = 0$			-2	mA
	2SB0949A	$V_{CE} = -40\text{ V}, I_B = 0$			-2	
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = -5\text{ V}, I_C = 0$			-2	mA
Forward current transfer ratio	h_{FE1}	$V_{CE} = -4\text{ V}, I_C = -1\text{ A}$	1000			—
	h_{FE2}^*	$V_{CE} = -4\text{ V}, I_C = -2\text{ A}$	1000		10000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2\text{ A}, I_B = -8\text{ mA}$			-2.5	V
Transition frequency	f_T	$V_{CE} = -10\text{ V}, I_C = -0.5\text{ A}, f = 1\text{ MHz}$		20		MHz
Turn-on time	t_{on}	$I_C = -2\text{ A}, I_{B1} = -8\text{ mA}, I_{B2} = 8\text{ mA}$		0.4		μs
Storage time	t_{stg}	$V_{CC} = -50\text{ V}$		1.5		μs
Fall time	t_f			0.5		μs

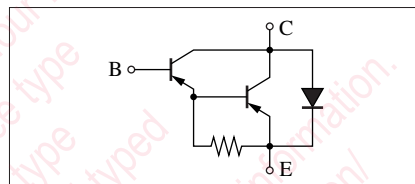
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *: Rank classification

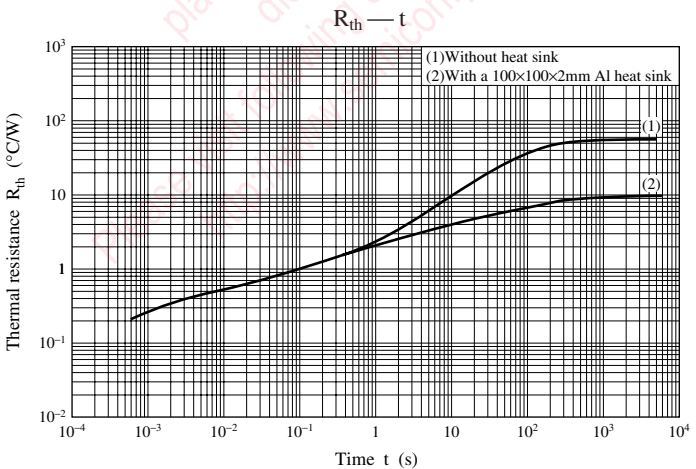
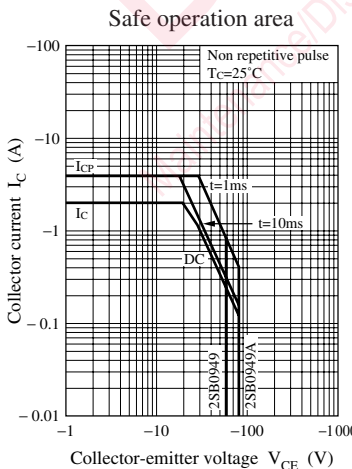
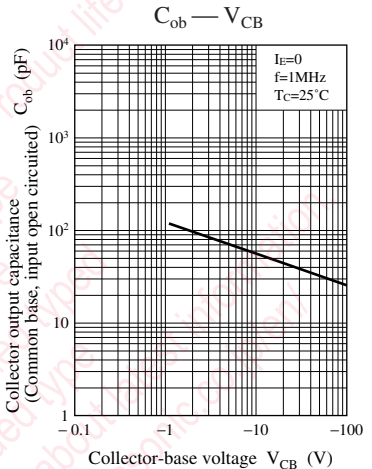
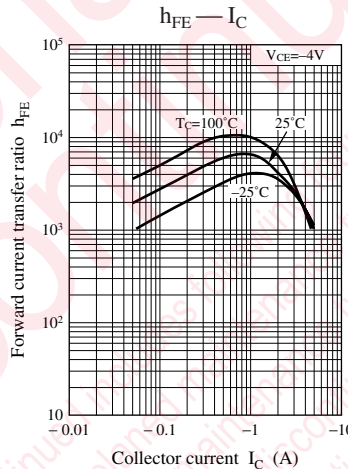
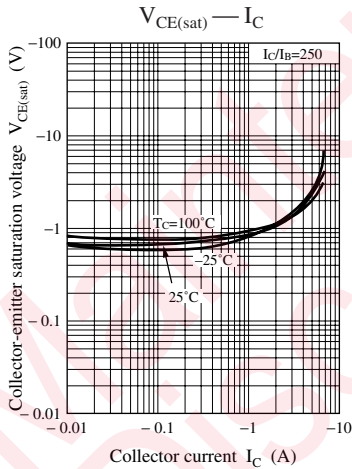
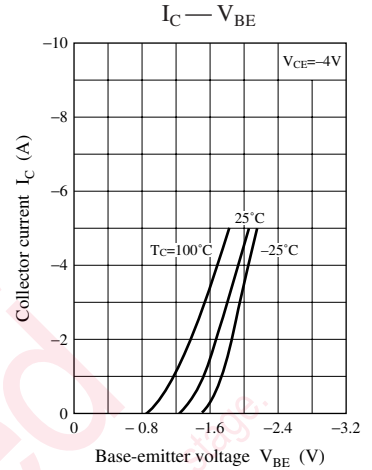
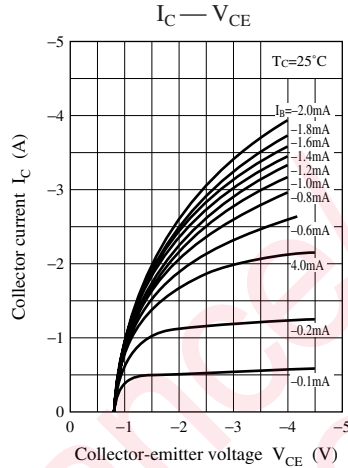
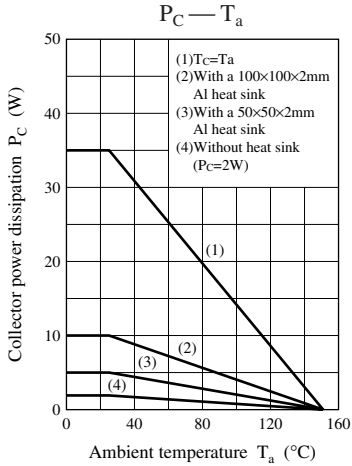
Rank	R	Q	P
h_{FE2}	1 000 to 2 500	2 000 to 5 000	4 000 to 10 000

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



Internal Connection





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