

# 2SB0943 (2SB943)

## Silicon PNP epitaxial planar type

For power switching

Complementary to 2SD1268

### ■ Features

- Low collector to emitter saturation voltage  $V_{CE(sat)}$
- Satisfactory linearity of forward current transfer ratio  $h_{FE}$
- Large collector current  $I_C$
- Full-pack package which can be installed to the heat sink with one screw

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

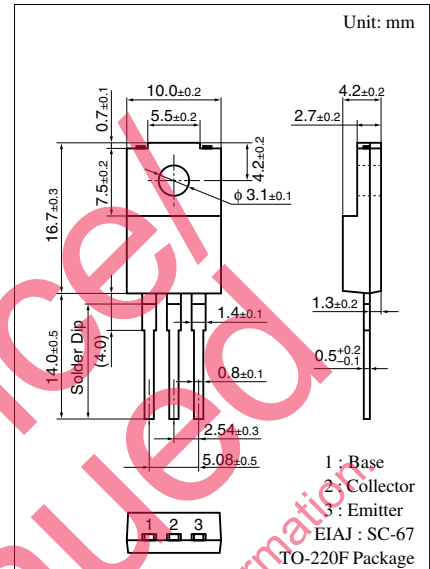
Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	-130	V
Collector to emitter voltage	$V_{CEO}$	-80	V
Emitter to base voltage	$V_{EBO}$	-7	V
Peak collector current	$I_{CP}$	-6	A
Collector current	$I_C$	-3	A
Collector power dissipation	$P_C$	$T_C = 25^\circ\text{C}$	30
		$T_a = 25^\circ\text{C}$	2
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

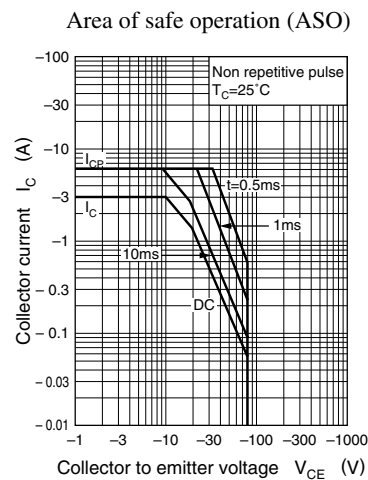
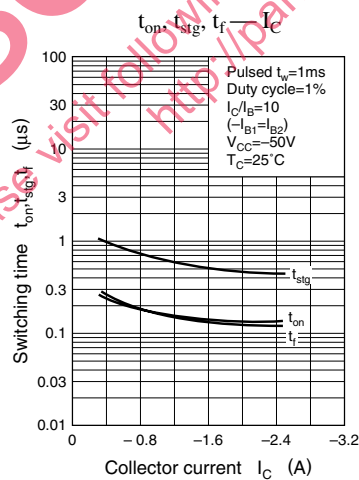
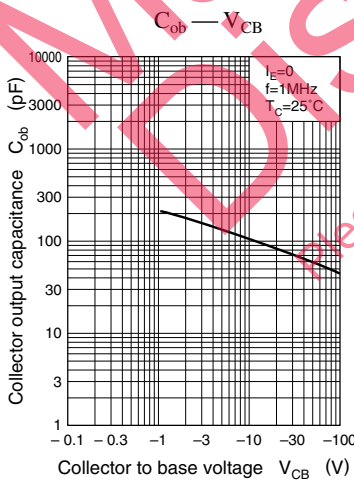
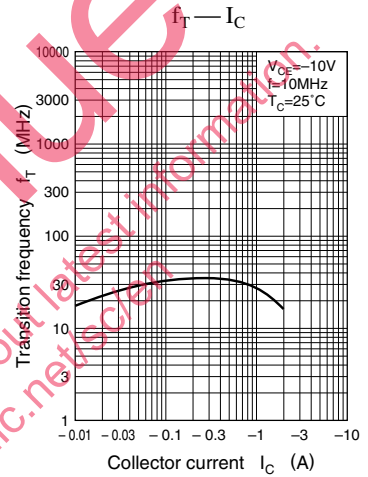
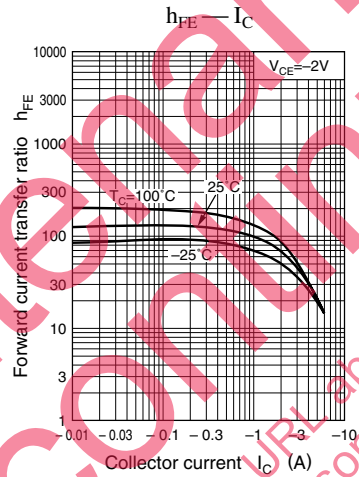
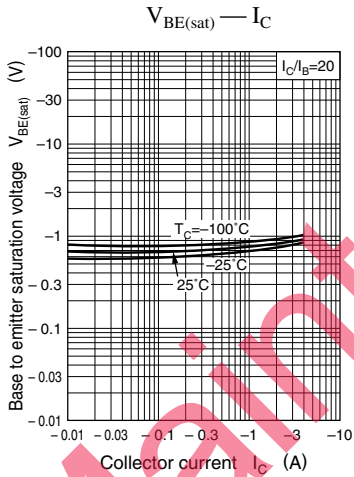
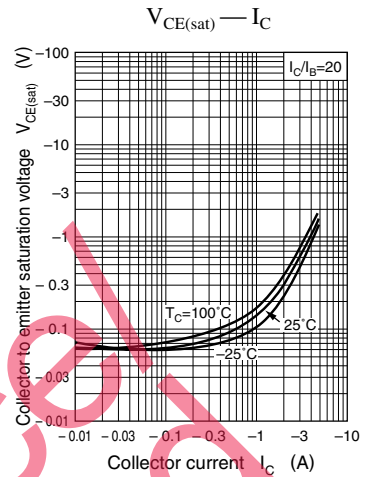
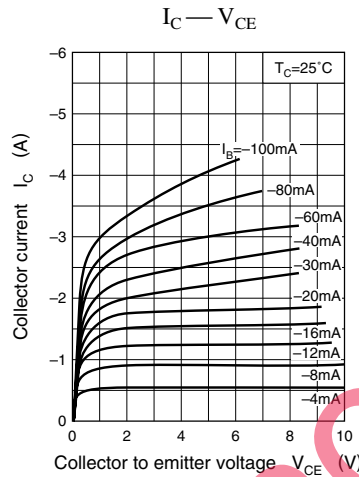
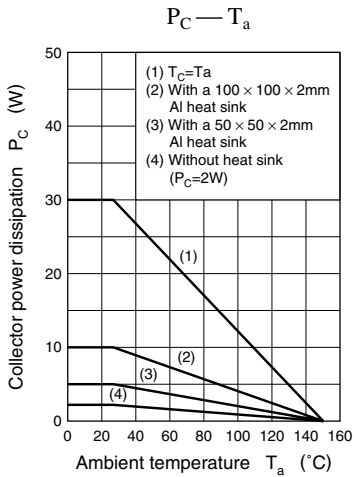
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -100\text{ V}, I_E = 0$			-10	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -5\text{ V}, I_C = 0$			-50	$\mu\text{A}$
Collector to emitter voltage	$V_{CEO}$	$I_C = -10\text{ mA}, I_B = 0$	-80			V
Forward current transfer ratio	$h_{FE1}$	$V_{CE} = -2\text{ V}, I_C = -0.1\text{ A}$	45			
	$h_{FE2}$	$V_{CE} = -2\text{ V}, I_C = -0.5\text{ A}$	90		260	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2\text{ A}, I_B = -0.1\text{ A}$			-0.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2\text{ A}, I_B = -0.1\text{ A}$			-1.5	V
Transition frequency	$f_T$	$V_{CE} = -10\text{ V}, I_C = -0.5\text{ A}, f = 10\text{ MHz}$		30		MHz
Turn-on time	$t_{on}$	$I_C = -0.5\text{ A}, I_{B1} = -50\text{ mA}, I_{B2} = 50\text{ mA}$		0.3		$\mu\text{s}$
Storage time	$t_{stg}$			1.1		$\mu\text{s}$
Fall time	$t_f$			0.3		$\mu\text{s}$

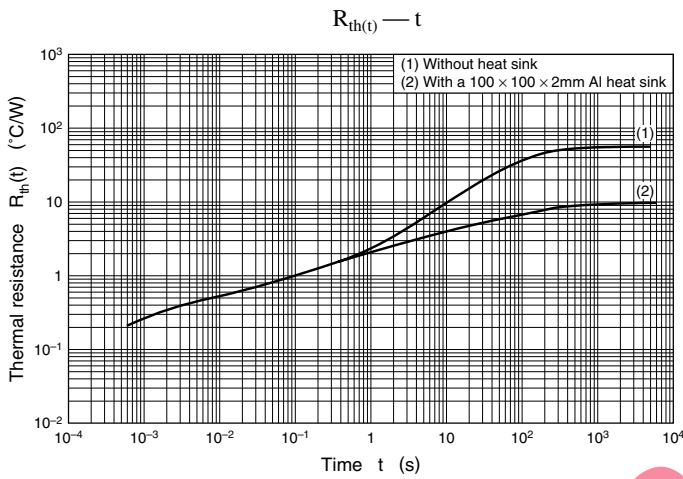
Note) \*: Rank classification

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



Note.) The Part number in the Parenthesis shows conventional part number.





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