

2SB952, 2SB952A

Silicon PNP Epitaxial Planar Type

Low Voltage Switching

■ Features

- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- High speed switching
- "N Type" package configuration with a cooling fin for direct soldering on PC board of a small-size electronic equipment

■ Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	2SB952	V_{CBO}	V
	2SB952A		
Collector-emitter voltage	2SB952	V_{CEO}	V
	2SB952A		
Emitter-base voltage	V_{EBO}	-5	V
Peak collector current	I_{CP}	-12	A
Collector current	I_C	-7	A
Collector power dissipation	$T_c=25^\circ\text{C}$	P_C	W
	$T_a=25^\circ\text{C}$		
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55~+150	$^\circ\text{C}$

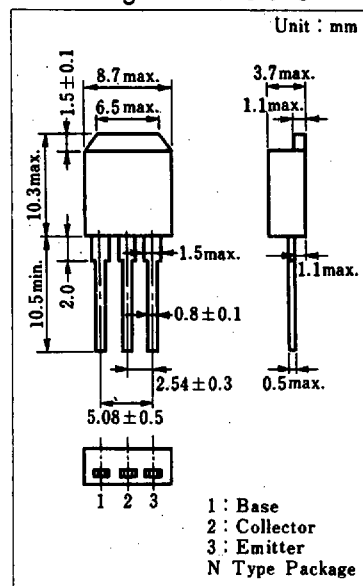
■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	2SB952	$V_{CB}=-40\text{ V}, I_E=0$			-50	μA
	2SB952A				-50	
Emitter cutoff current	I_{EBO}	$V_{EB}=-5\text{ V}, I_C=0$			-50	μA
Collector-emitter voltage	2SB952	$I_C=-10\text{ mA}, I_B=0$	-20			V
	2SB952A		-40			
DC current gain	h_{FE1}	$V_{CE}=-2\text{ V}, I_C=-0.1\text{ A}$	45			
	h_{FE2}^*	$V_{CE}=-2\text{ V}, I_C=-2\text{ A}$	60		260	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-5\text{ A}, I_B=-0.16\text{ A}$			-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-5\text{ A}, I_B=-0.16\text{ A}$			-1.5	V
Transition frequency	f_T	$V_{CE}=-10\text{ V}, I_C=-0.5\text{ A}, f=10\text{ MHz}$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{ V}, I_E=0, f=1\text{ MHz}$		140		pF
Turn-on time	t_{on}	$I_C=-2\text{ A}, I_{B1}=-66\text{ mA}, I_{B2}=66\text{ mA}$		0.1		μs
Storage time	t_{stg}			0.5		μs
Collector current fall time	t_f			0.1		μs

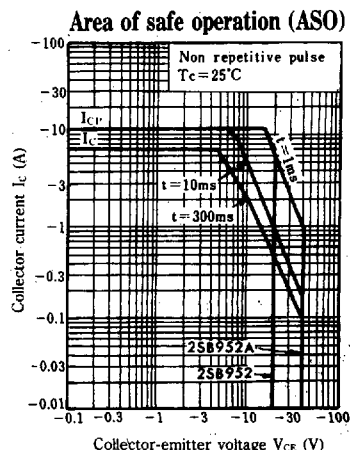
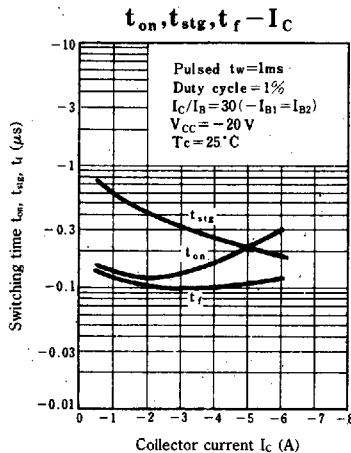
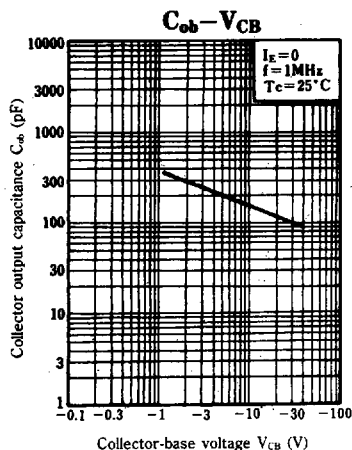
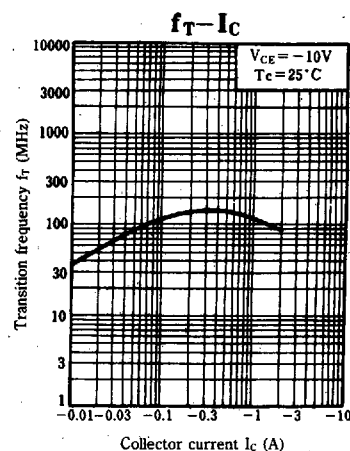
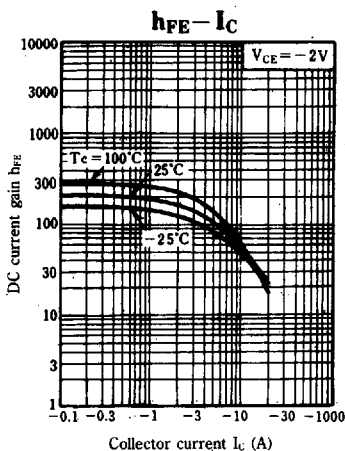
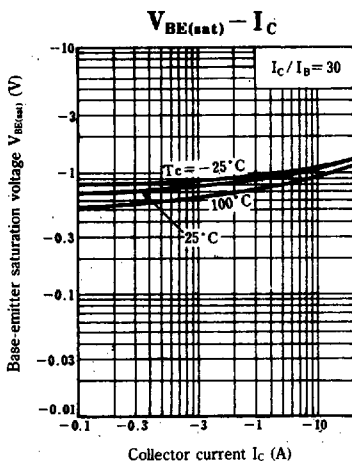
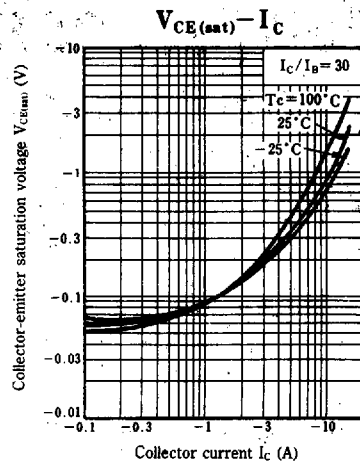
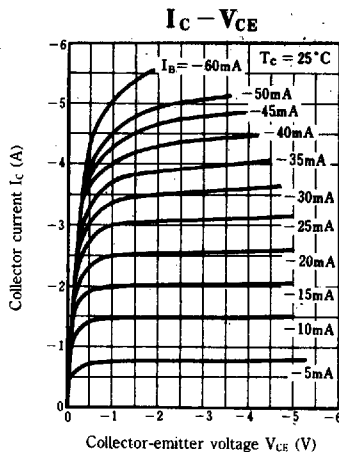
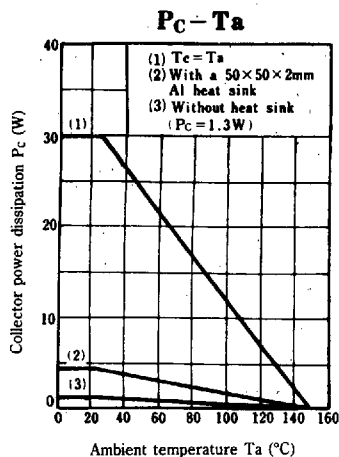
* h_{FE2} Classifications

Class	R	Q	P
h_{FE2}	60~120	90~180	130~260

■ Package Dimensions



*Surface-mount type is also available.
(Refer to p.82.)



Note) Refer to P.152 (on 2SB929/A) for $R_{th(t)} - t$ characteristics.

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