

2SB943

Silicon PNP Epitaxial Planar Type

Power Switching

Complementary Pair with 2SD1268

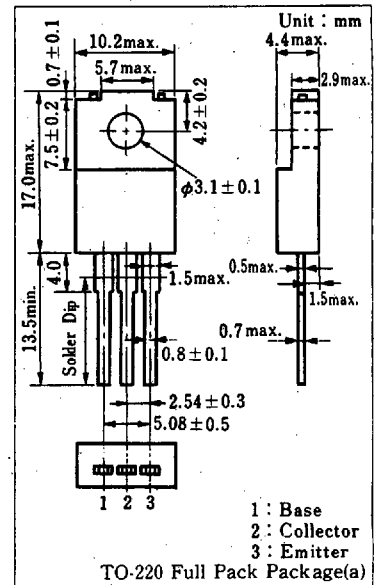
■ Features

- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- Good linearity of DC current gain (h_{FE})
- High collector current (I_C)
- "Full Pack" package for simplified mounting on a heat sink with one screw

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

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	-130	V
Collector-emitter voltage	V_{CEO}	-80	V
Emitter-base voltage	V_{EB0}	-7	V
Peak collector current	I_{CP}	-6	A
Collector current	I_C	-3	A
Collector power dissipation	$T_c=25^\circ\text{C}$	30	W
	$T_a=25^\circ\text{C}$	2	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55~+150	$^\circ\text{C}$

■ Package Dimensions

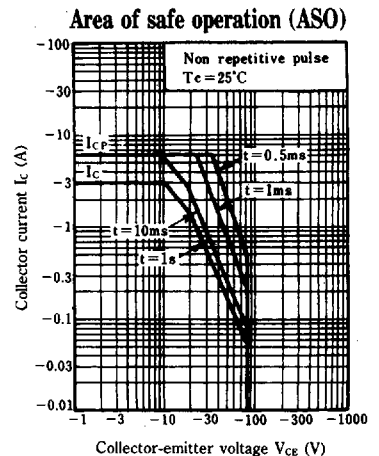
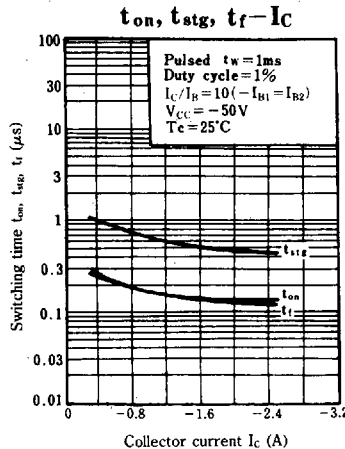
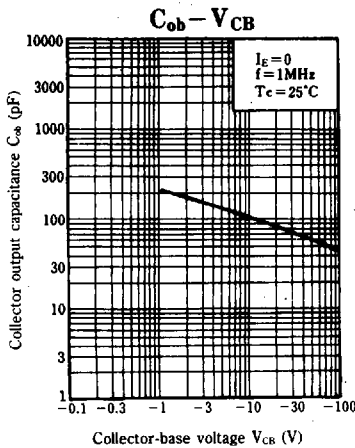
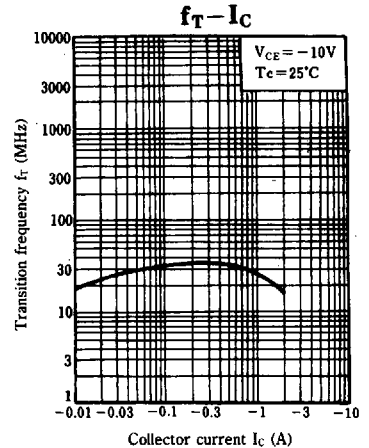
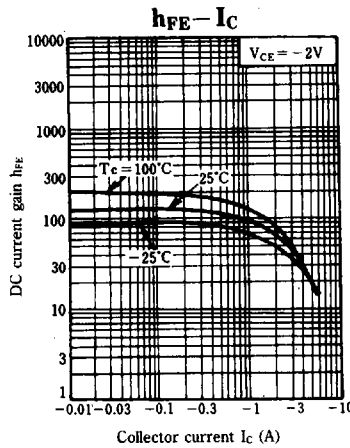
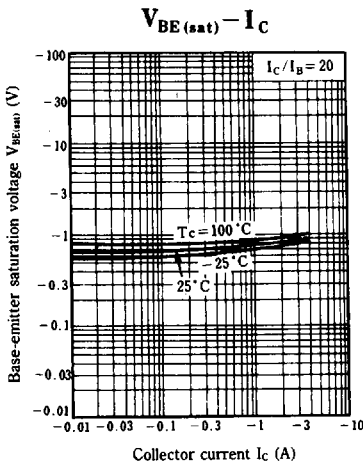
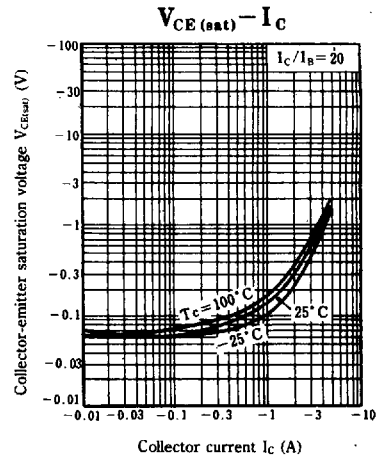
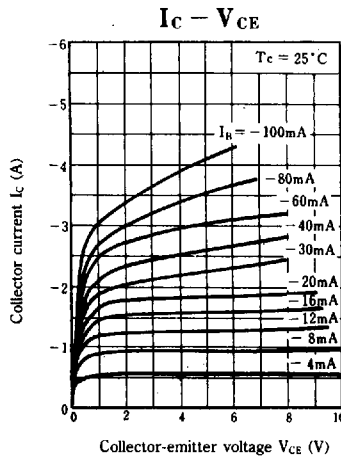
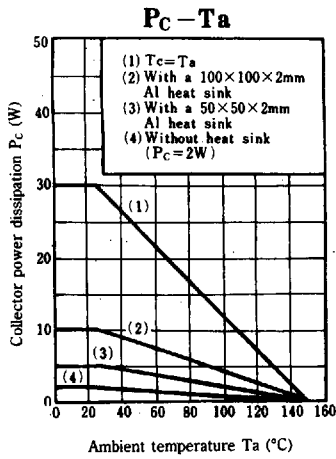


■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CB0}	$V_{CB} = -100\text{V}, I_E = 0$			-10	μA
Emitter cutoff current	I_{EB0}	$V_{EB} = -5\text{V}, I_C = 0$			-50	μA
Collector-emitter voltage	V_{CEO}	$I_C = -10\text{mA}, I_B = 0$	-80			V
DC current gain	h_{FE1}	$V_{CE} = -2\text{V}, I_C = -0.1\text{A}$	45			
	h_{FE2}^*	$V_{CE} = -2\text{V}, I_C = -0.5\text{A}$	60		260	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2\text{A}, I_B = -0.1\text{A}$			-0.5	V
Base-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		μs
Storage time	t_{stg}			1.1		μs
Collector current fall time	t_f			0.3		μs

* h_{FE2} Classifications

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



Note) Refer to P.177 (on 2SB941/A) for $R_{th(j-c)}$ - t characteristics.