

2SB1488

Silicon PNP triple diffusion planar type

For power switching

■ Features

- High forward current transfer ratio h_{FE}
- High-speed switching
- High collector-base voltage (Emitter open) V_{CBO}
- Allowing supply with the radial taping

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	-400	V
Collector-emitter voltage (Base open)	V_{CEO}	-400	V
Emitter-base voltage (Collector open)	V_{EBO}	-7	V
Collector current	I_C	-0.5	A
Peak collector current	I_{CP}	-1	A
Collector power dissipation *	P_C	1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note) *: Print circuit board: Copper foil area of 1 cm^2 or more, and the board thickness of 1.7 mm for the collector portion

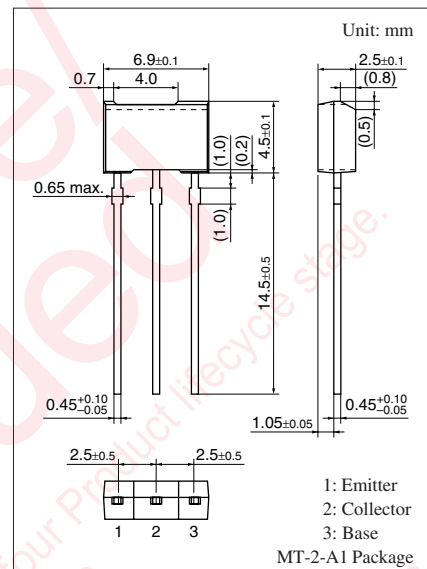
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

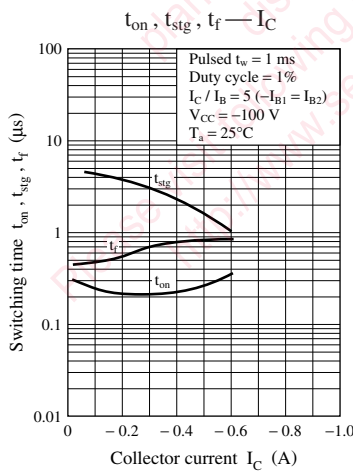
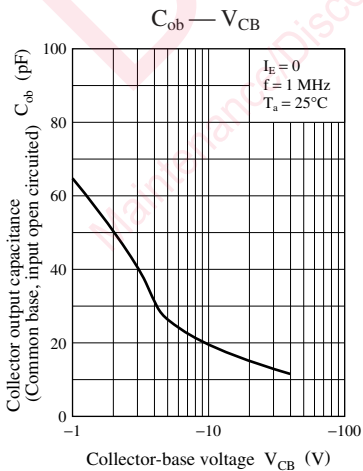
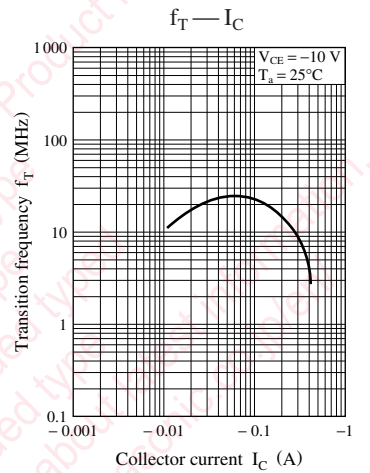
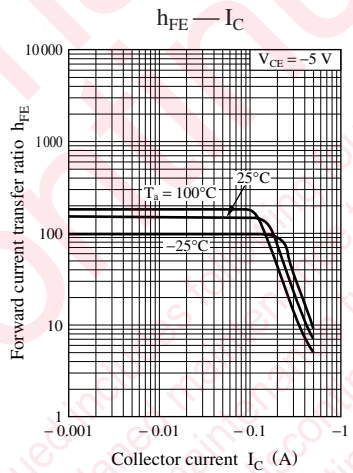
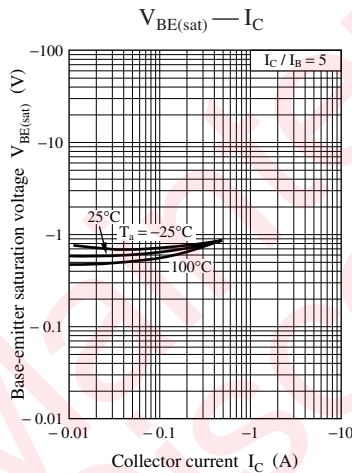
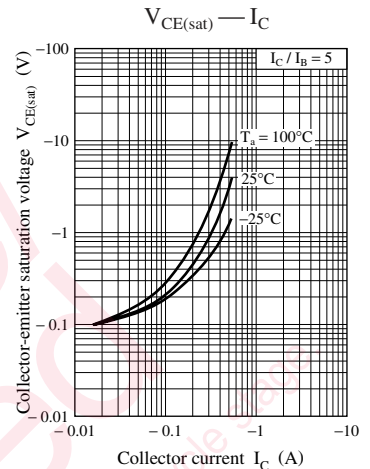
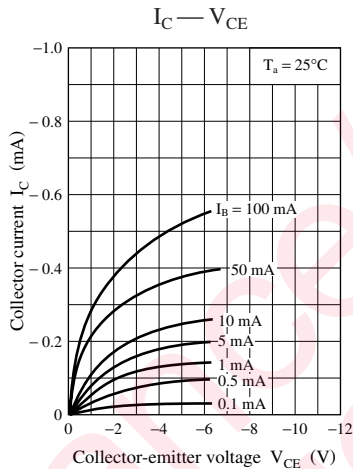
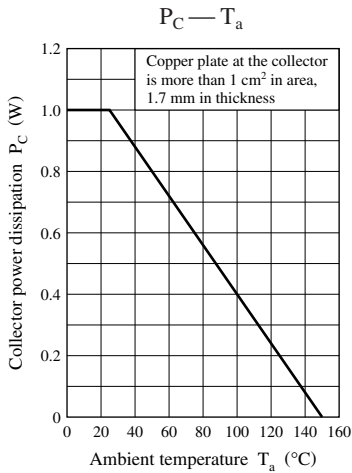
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -1\text{ mA}$, $I_B = 0$	-400			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -400\text{ V}$, $I_E = 0$			-1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = -100\text{ V}$, $I_B = 0$			-1	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = -5\text{ V}$, $I_C = 0$			-1	μA
Forward current transfer ratio	h_{FE1} *	$V_{CE} = -5\text{ V}$, $I_C = -50\text{ mA}$	80		280	—
	h_{FE2}	$V_{CE} = -5\text{ V}$, $I_C = -300\text{ mA}$	10			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{ mA}$, $I_B = -10\text{ mA}$		-0.25	-0.50	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100\text{ mA}$, $I_B = -10\text{ mA}$		-0.8	-1.2	V
Transition frequency	f_T	$V_{CB} = -10\text{ V}$, $I_E = 0.1\text{ A}$, $f = 200\text{ MHz}$		25		MHz
Turn-on time	t_{on}	$I_C = -100\text{ mA}$, $R_L = 1.5\text{ k}\Omega$		0.4	1.0	μs
Storage time	t_{stg}	$I_{B1} = -10\text{ mA}$, $I_{B2} = 10\text{ mA}$		5.5	6.5	μs
Fall time	t_f	$V_{CC} = -150\text{ V}$		0.5	1.0	μs
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$		20	40	pF

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

2. *: Rank classification

Rank	P	Q
h_{FE1}	80 to 160	130 to 280





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