

# 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  $1\text{ cm}^2$  or more, and the board thickness of 1.7 mm for the collector portion

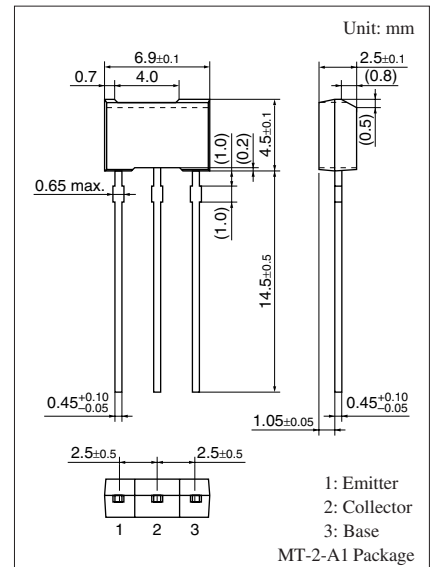
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

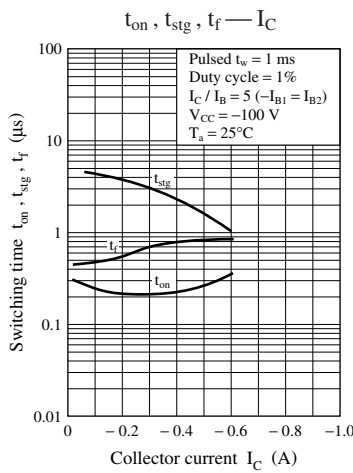
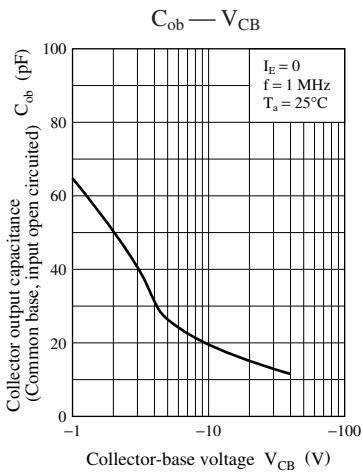
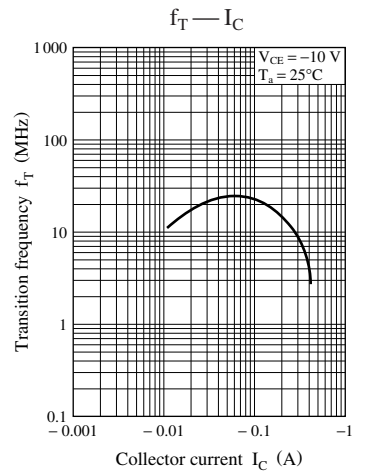
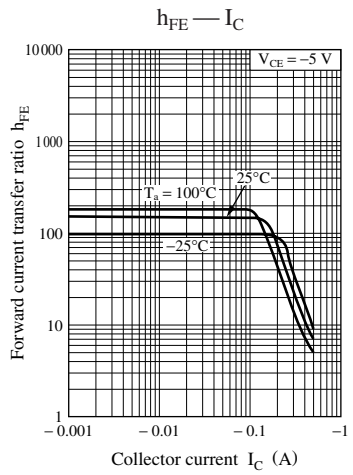
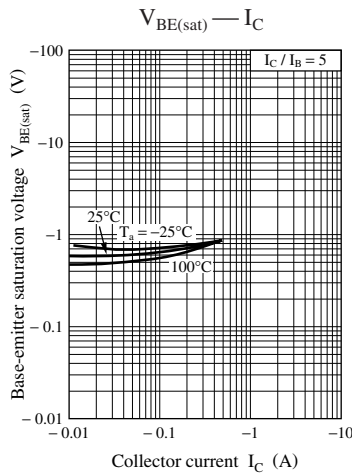
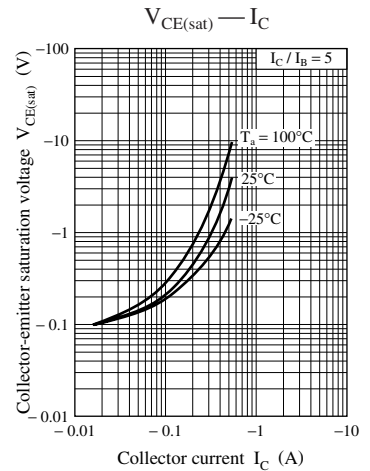
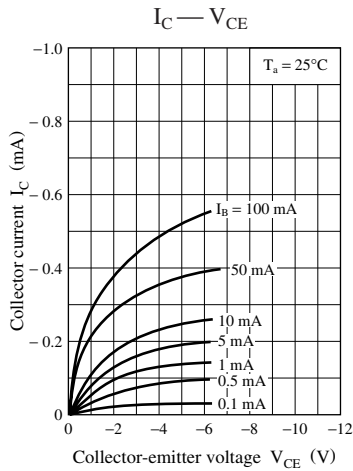
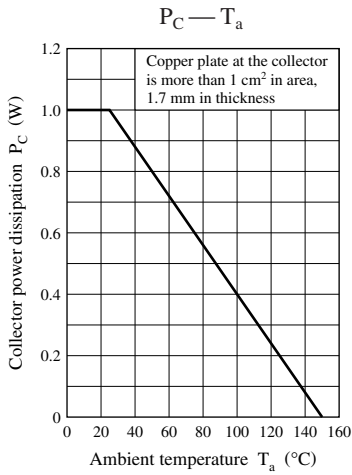
Parameter	Symbol	Conditions	Min	Typ	Max	Unit	
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = -1\text{ mA}$ , $I_B = 0$	-400			V	
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = -400\text{ V}$ , $I_E = 0$			-1	$\mu\text{A}$	
Collector-emitter cutoff current (Base open)	$I_{CEO}$	$V_{CE} = -100\text{ V}$ , $I_B = 0$			-1	$\mu\text{A}$	
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = -5\text{ V}$ , $I_C = 0$			-1	$\mu\text{A}$	
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	$\mu\text{s}$	
Storage time	$t_{stg}$		$I_{B1} = -10\text{ mA}$ , $I_{B2} = 10\text{ mA}$		5.5	6.5	$\mu\text{s}$
Fall time	$t_f$		$V_{CC} = -150\text{ V}$		0.5	1.0	$\mu\text{s}$
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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