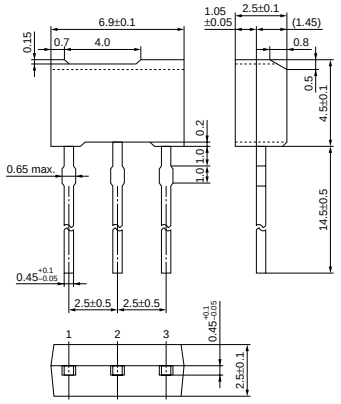
2SB1488

Silicon PNP triple diffusion planer type

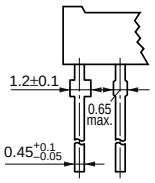
For power switching

Unit: mm



Note: In addition to the lead type shown in the upper figure, the type as shown in the lower figure is also available.

1:Emitter
2:Collector
3:Base
MT2 Type Package



(HW type)

Features

- High foward current transfer ratio h_{FE}.
- High-speed switching.
- High collector to base voltage V_{CBO}.
- Allowing supply with the radial taping.

Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	–400	V
Collector to emitter voltage	V_{CEO}	–400	V
Emitter to base voltage	V_{EBO}	–7	V
Peak collector current	I_{CP}	–1	A
Collector current	I_C	– 0.5	A
Collector power dissipation	P_C	1	W
Junction temperature	T_j	150	˚C
Storage temperature	T_{stg}	–55 ~ +150	˚C

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

Electrical Characteristics (Ta=25˚C)

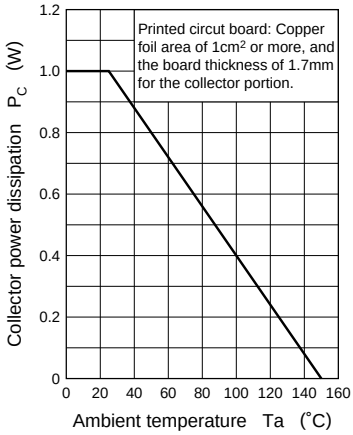
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = –400V, I_E = 0			–1	µA
	I_{CEO}	V_{CE} = –100V, I_B = 0			–1	µA
Emitter cutoff current	I_{EBO}	V_{BE} = –5V, I_C = 0			–1	µA
Collector to emitter voltage	V_{CEO}	I_C = –1mA, I_B = 0	–400			V
Forward current transfer ratio	h_{FE1} *1	V_{CE} = –5V, I_C = –50mA	80		280	
	h_{FE2}	V_{CE} = –5V, I_C = –300mA*2	10			
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = –100mA, I_B = –10mA*2		– 0.25	– 0.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = –100mA, I_B = –10mA*2		– 0.8	–1.2	V
Transition frequency	f_T	V_{CB} = –10V, I_E = 0.1A, f = 1MHz*2		25		MHz
Turn-on time	t_{on}	I_C = –100mA, R_L = 1.5kΩ		0.4	1.0	µs
Storage time	t_{stg}	I_{B1} = –10mA, I_{B2} = 10mA		5.5	6.5	µs
Collector current fall time	t_f	V_{CC} = –150V		0.5	1.0	µs
Collector output capacitance	C_{ob}	V_{CB} = –10V, I_E = 0, f = 1MHz		20	40	pF

*2 Pulse measurement

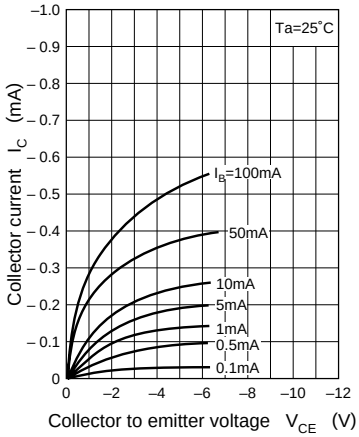
*1 h_{FE1} Rank classification

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

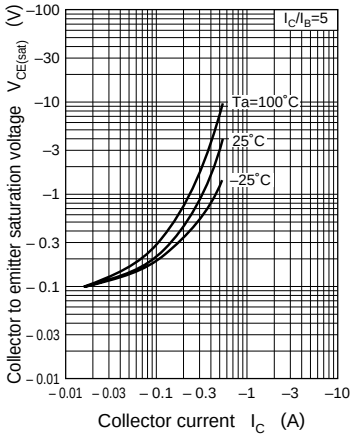
P_C — Ta



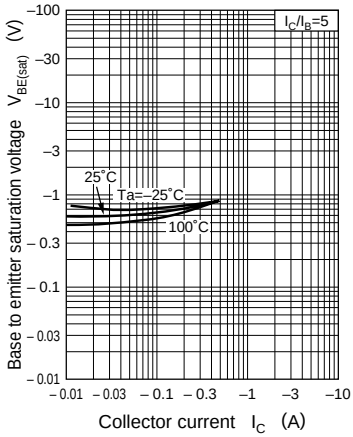
I_C — V_{CE}



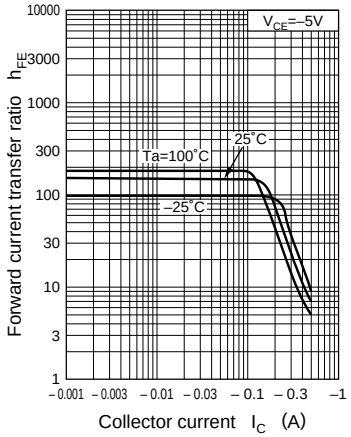
$V_{CE(sat)}$ — I_C



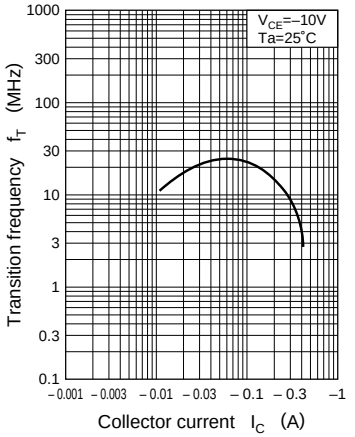
$V_{BE(sat)}$ — I_C



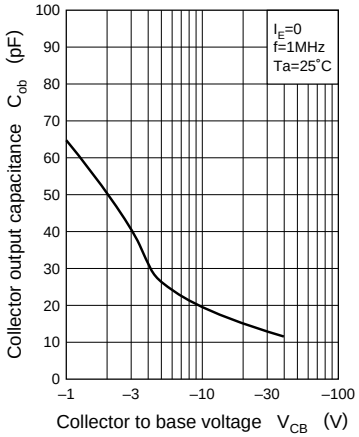
h_{FE} — I_C



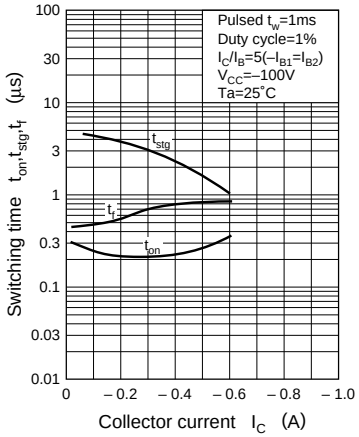
f_T — I_C



C_{ob} — V_{CB}



t_{on}, t_{stg}, t_f — I_C



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