

2SB1488

Silicon PNP triple diffusion planer type

For power switching

Features

- High forward 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 1cm² or more, and the board thickness of 1.7mm for the collector portion

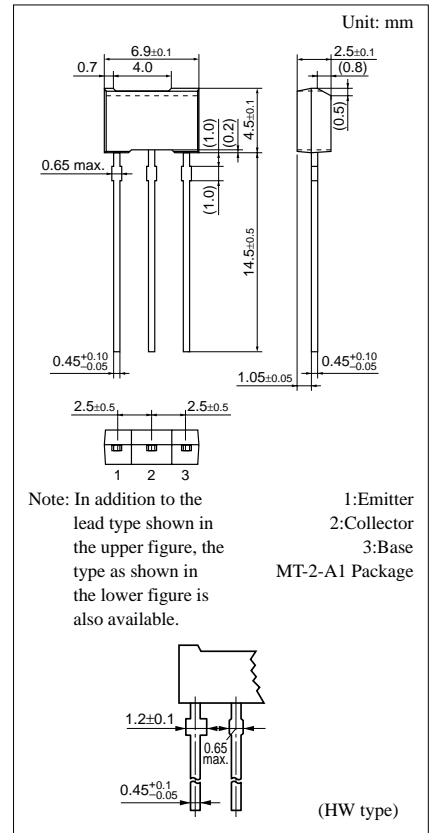
Electrical Characteristics (Ta=25°C)

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}	$I_C = -100mA, R_L = 1.5k\Omega$ $I_{B1} = -10mA, I_{B2} = 10mA$		0.4	1.0	μs
Storage time	t_{stg}			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

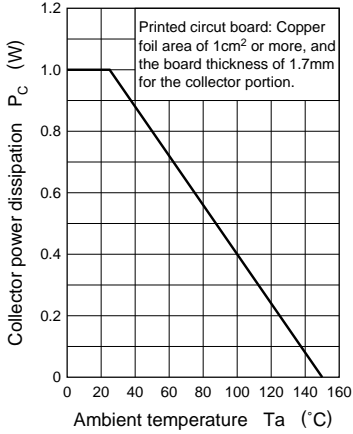
^{*1} h_{FE1} Rank classification

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

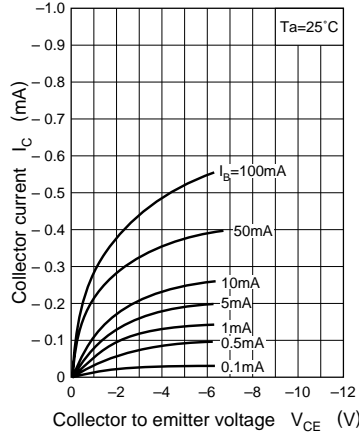
^{*2} Pulse measurement



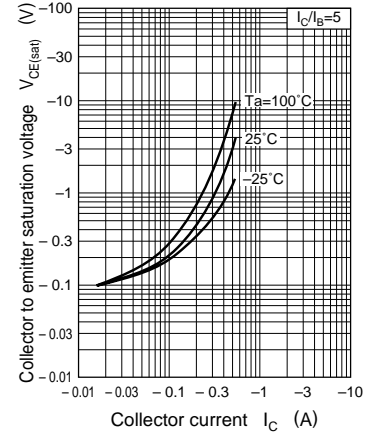
$P_C - T_a$



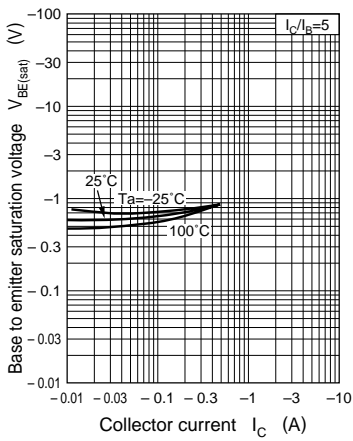
$I_C - V_{CE}$



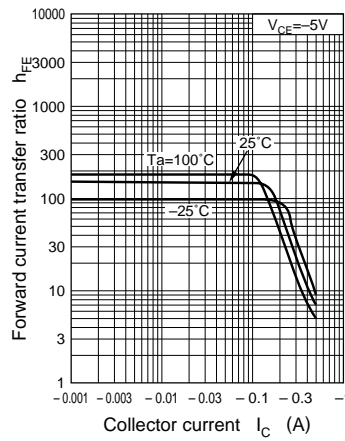
$V_{CE(sat)} - I_C$



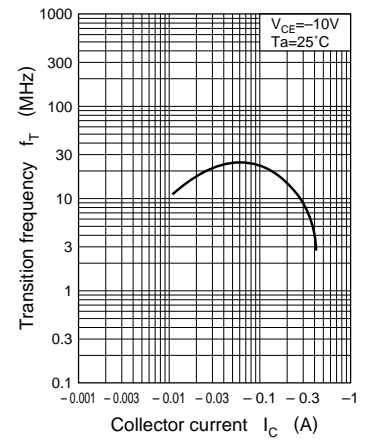
$V_{BE(sat)} - I_C$



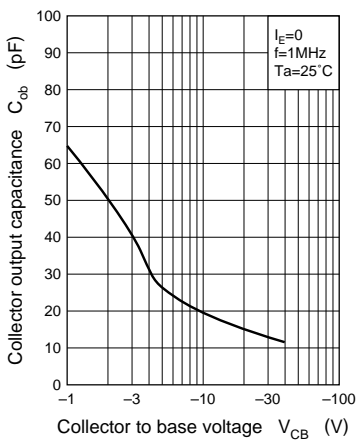
$h_{FE} - I_C$



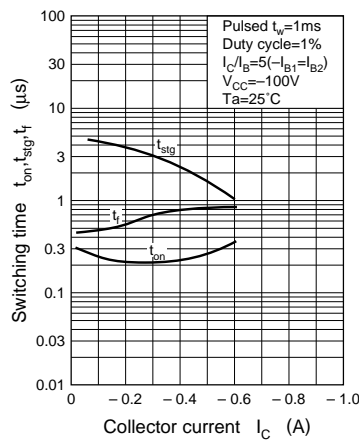
$f_T - I_C$



$C_{ob} - V_{CB}$



$t_{on}, t_{stg}, t_f - I_C$



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