

2SD2565

Silicon NPN triple diffusion planar type

For high voltage-withstand switching

■ Features

- High collector-base voltage (Emitter open) V_{CBO}
- High collector-emitter voltage (Base open) V_{CEO}
- Large collector power dissipation P_C
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

■ 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}	5	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	$^\circ\text{C}$

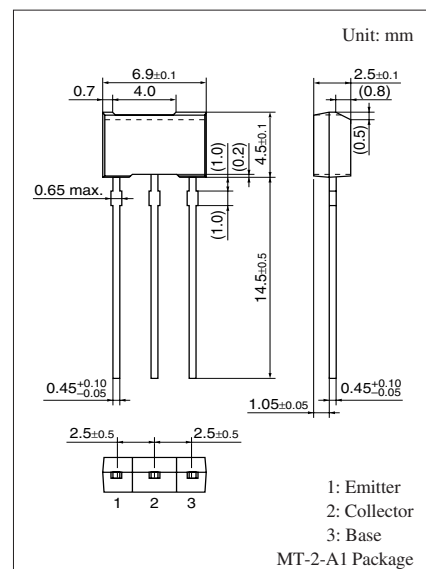
Note) *: Printed circuit board: Copper foil area of 1 cm² or more, and the board thickness of 1.7 mm for the collector portion

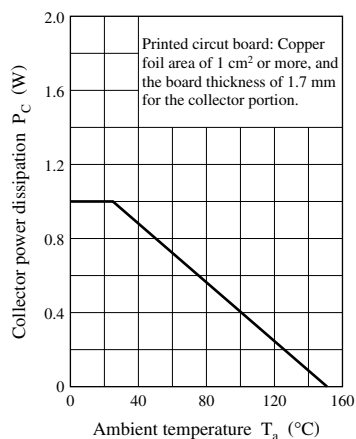
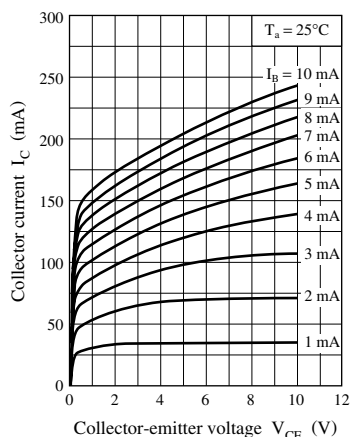
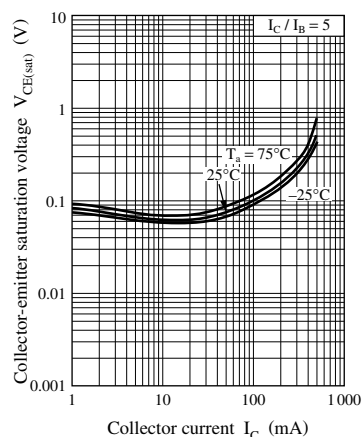
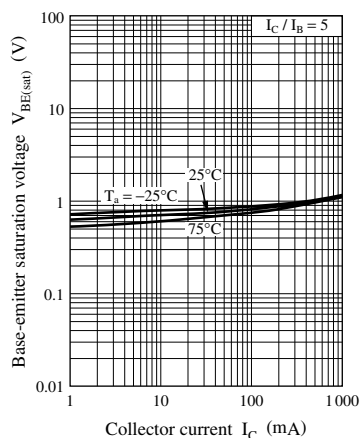
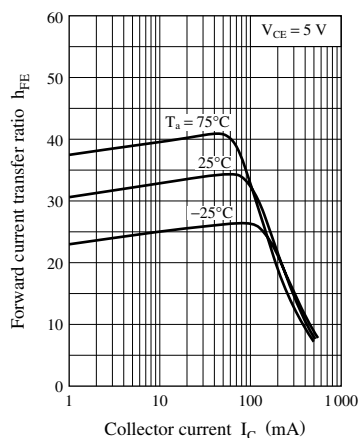
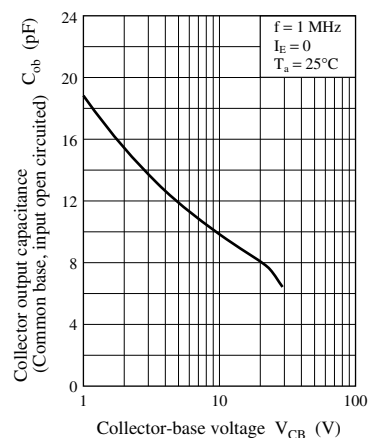
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 100\ \mu\text{A}$, $I_E = 0$	400			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 500\ \mu\text{A}$, $I_B = 0$	400			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 100\ \mu\text{A}$, $I_C = 0$	5			V
Forward current transfer ratio	h_{FE}	$V_{CE} = 5\ \text{V}$, $I_C = 30\ \text{mA}$	30			—
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 250\ \text{mA}$, $I_B = 50\ \text{mA}$			1.5	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = 250\ \text{mA}$, $I_B = 50\ \text{mA}$			1.5	V
Transition frequency	f_T	$V_{CB} = 30\ \text{V}$, $I_E = -20\ \text{mA}$, $f = 200\ \text{MHz}$		30		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 30\ \text{V}$, $I_E = 0$, $f = 1\ \text{MHz}$		6	20	pF
Turn-on time	t_{on}	$I_C = 100\ \text{mA}$ $I_{B1} = 10\ \text{mA}$, $I_{B2} = -10\ \text{mA}$ $V_{CC} = 200\ \text{V}$		0.8		μs
Storage time	t_{stg}			3.7		μs
Fall time	t_f			0.6		μs

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

2. *: Pulse measurement



$P_C - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $C_{ob} - V_{CB}$ 

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