

# 2SD2565

## Silicon NPN triple diffusion planer type

For high voltage-withstand switching

### ■ Features

- High collector to base voltage  $V_{CBO}$
- High collector to emitter voltage  $V_{CEO}$
- Large collector power dissipation  $P_C$
- Low collector to 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 (Ta=25°C)

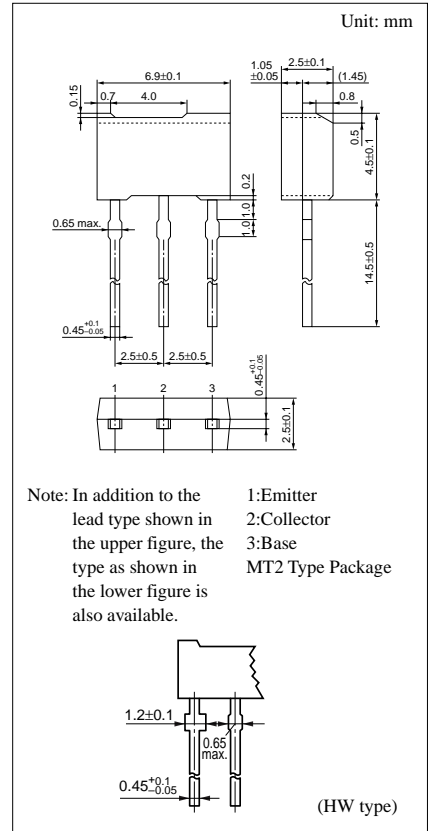
Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	400	V
Collector to emitter voltage	$V_{CEO}$	400	V
Emitter to base voltage	$V_{EBO}$	5	V
Peak collector current	$I_{CP}$	1	A
Collector current	$I_C$	0.5	A
Collector power dissipation	$P_C^{*1}$	1	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C

\*1 Printed circuit board: Copper foil area of 1cm<sup>2</sup> or more, and the board thickness of 1.7mm for the collector portion

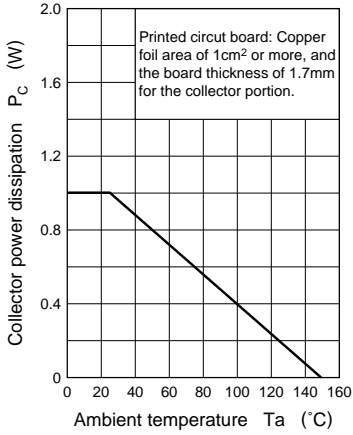
### ■ Electrical Characteristics (Ta=25°C)

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

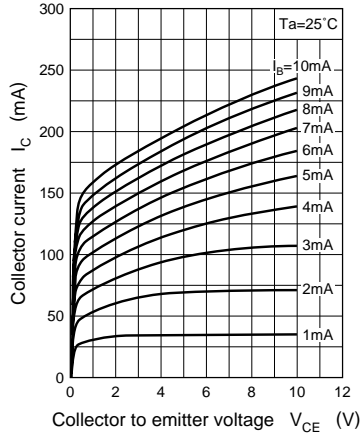
\* Pulse measurement



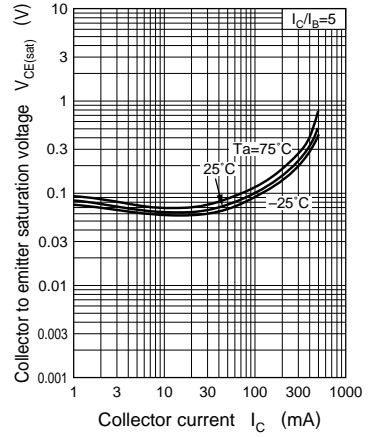
$P_C - T_a$



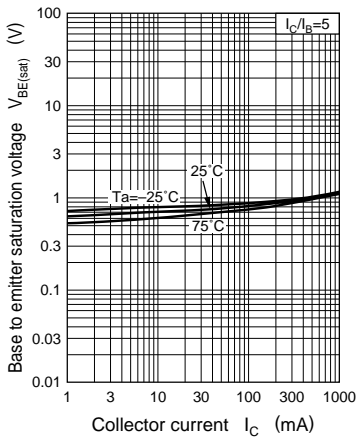
$I_C - V_{CE}$



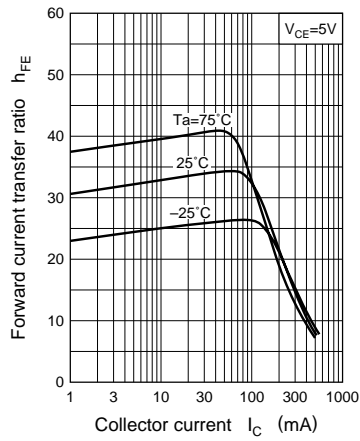
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



$h_{FE} - I_C$



$C_{ob} - V_{CB}$

