

2SC5018

Silicon NPN triple diffusion planer type

For high breakdown voltage high-speed switching

■ Features

- High collector to base voltage V_{CBO} .
- High emitter to base voltage V_{EBO} .

■ Absolute Maximum Ratings (Ta=25°C)

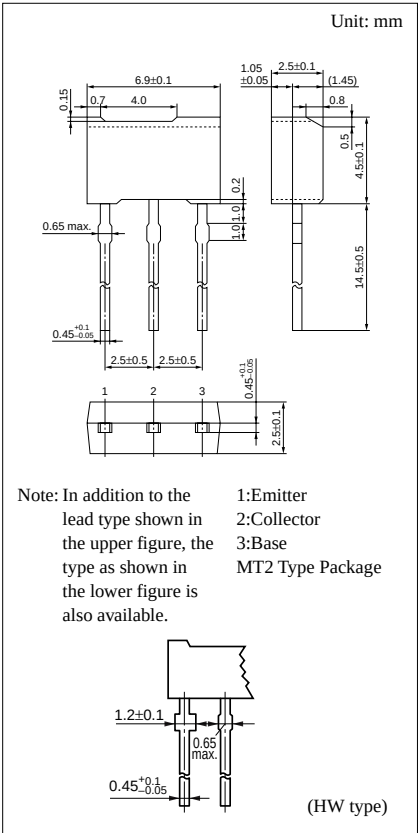
Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	500	V
Collector to emitter voltage	V_{CEO}	400	V
Emitter to base voltage	V_{EBO}	7	V
Peak collector current	I_{CP}	1.5	A
Collector current	I_C	0.8	A
Collector power dissipation	P_C^*	1	W
Junction temperature	T_j	150	°C
Storage temperature	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

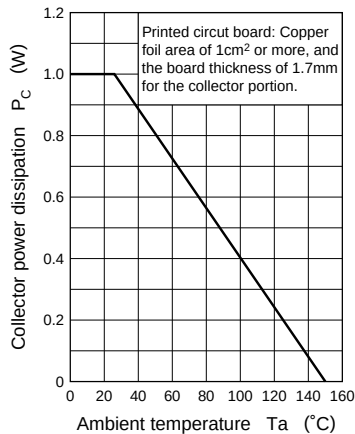
■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 500V, I_E = 0$			100	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 7V, I_C = 0$			100	μA
Forward current transfer ratio	h_{FE1}	$V_{CE} = 5V, I_C = 10mA$	50		300	
	h_{FE2}	$V_{CE} = 5V, I_C = 300mA^{*1}$	10			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100mA, I_B = 10mA^{*1}$		0.1	0.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100mA, I_B = 10mA^{*1}$		0.8	1.0	V
Transition frequency	f_T	$V_{CB} = 10V, I_E = -50mA, f = 10MHz$		20		MHz
Turn-on time	t_{on}	$I_C = 200mA, I_{B1} = 40mA$ $I_{B2} = -40mA, V_{CC} = 150V$		0.7		μs
Storage time	t_{stg}			4.0		μs
Fill time	t_f			0.4		μs

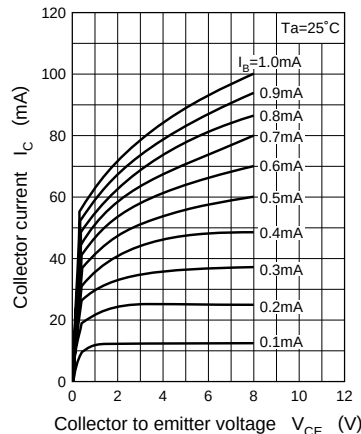
*1 Pulse measurement



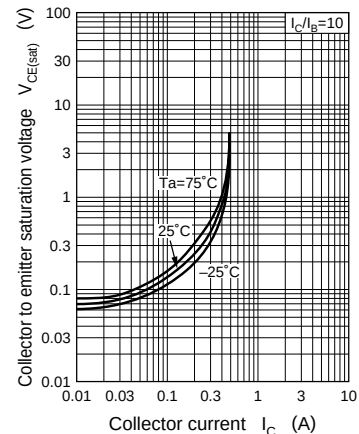
$P_C - T_a$



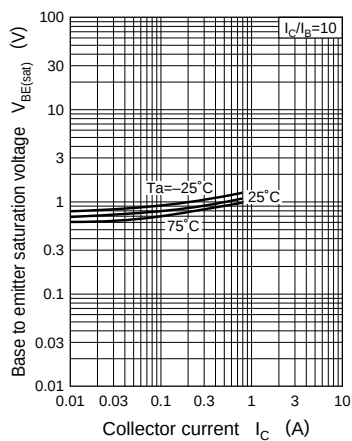
$I_C - V_{CE}$



$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



$h_{FE} - I_C$

