

# 2SC5419

## Silicon NPN triple diffusion planer type

For low-frequency output amplification

### Features

- High collector to emitter voltage  $V_{CEO}$ .
- High transition frequency  $f_T$ .
- Allowing supply with the radial taping.

### Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	300	V
Collector to emitter voltage	$V_{CEO}$	300	V
Emitter to base voltage	$V_{EBO}$	7	V
Peak collector current	$I_{CP}$	100	mA
Collector current	$I_C$	70	mA
Collector power dissipation	$P_C^{*1}$	1.0	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C

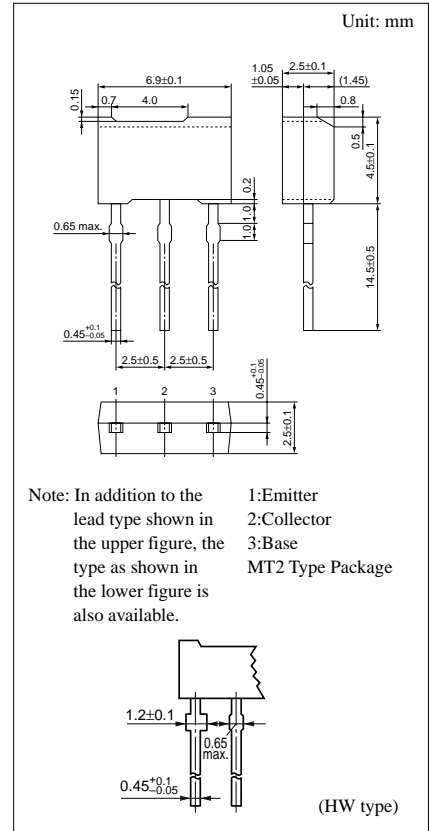
\*1 Printed circuit board: Copper foil area of 1cm<sup>2</sup> or more, and the board thickness of 1.7mm for the collector portion

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

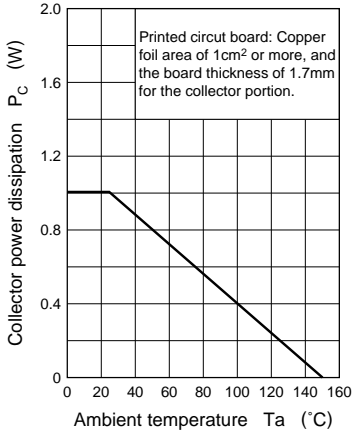
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CEO}$	$V_{CE} = 120V, I_B = 0$			1	μA
Collector to emitter voltage	$V_{CEO}$	$I_C = 100\mu A, I_B = 0$	300			V
Emitter to base voltage	$V_{EBO}$	$I_E = 1\mu A, I_C = 0$	7			V
Forward current transfer ratio	$h_{FE}^{*1}$	$V_{CE} = 10V, I_C = 5mA$	30		220	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50mA, I_B = 5mA$			1.2	V
Transition frequency	$f_T$	$V_{CB} = 10V, I_E = -10mA, f = 200MHz$		50		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1MHz$			10	pF

\*1 $h_{FE}$  Rank classification

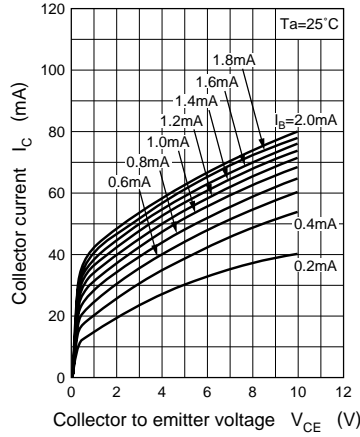
Rank	P	Q	R
$h_{FE}$	30 ~ 100	60 ~ 150	100 ~ 220



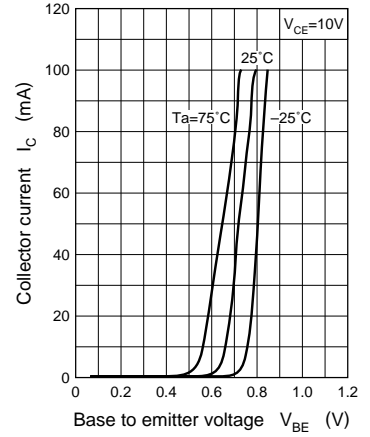
$P_C - T_a$



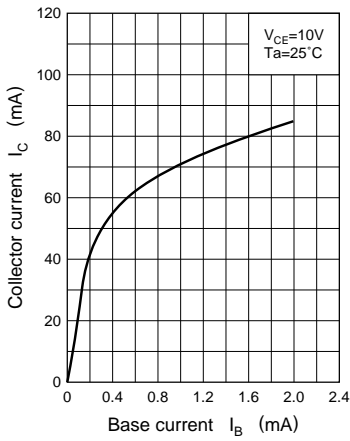
$I_C - V_{CE}$



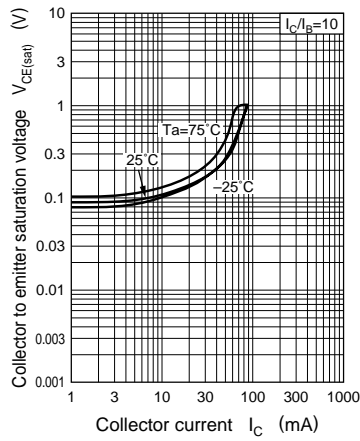
$I_C - V_{BE}$



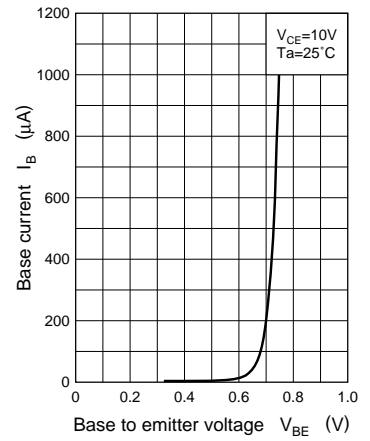
$I_C - I_B$



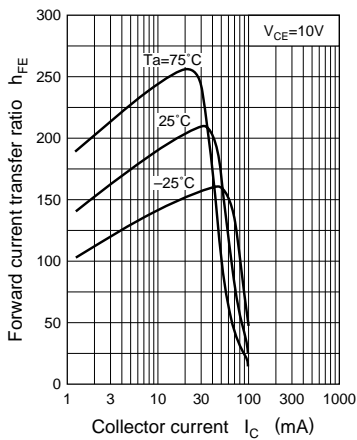
$V_{CE(sat)} - I_C$



$I_B - V_{BE}$



$h_{FE} - I_C$



$C_{ob} - V_{CB}$

