

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

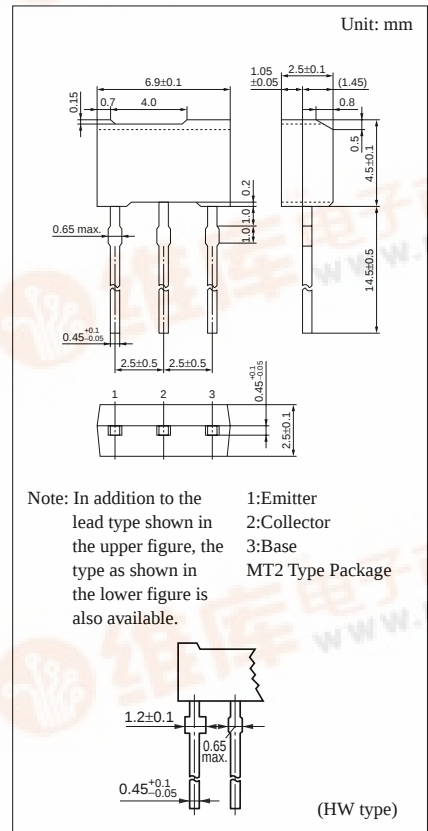
*1 Printed circuit board: Copper foil area of 1cm² or more, and the board thickness of 1.7mm for the collector portion

Electrical Characteristics (Ta=25°C)

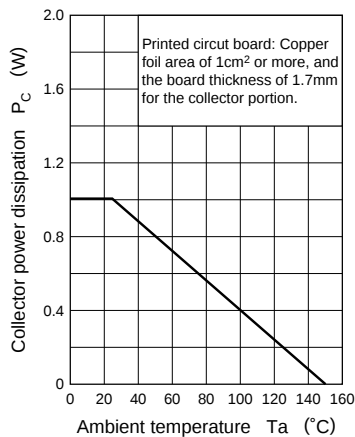
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CEO}	$V_{CE} = 120V, I_B = 0$			1	μA
Collector to emitter voltage	V_{CEO}	$I_C = 100\mu A, I_B = 0$	300			V
Emitter to base voltage	V_{EBO}	$I_E = 1\mu A, I_C = 0$	7			V
Forward current transfer ratio	h_{FE}^{*1}	$V_{CE} = 10V, I_C = 5mA$	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

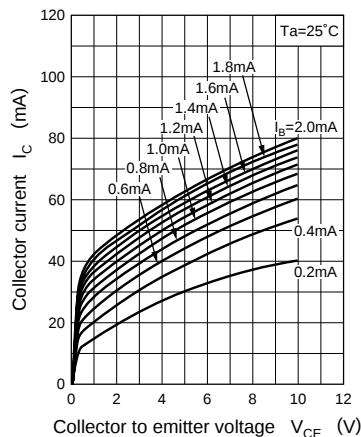
Rank	P	Q	R
h_{FE}	30 ~ 100	60 ~ 150	100 ~ 220



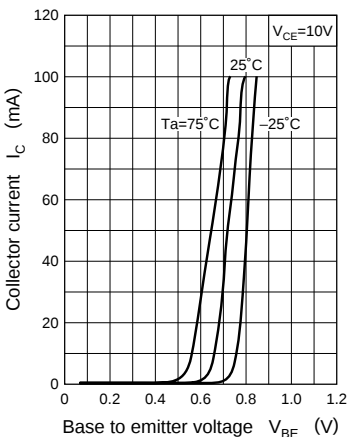
$P_C - T_a$



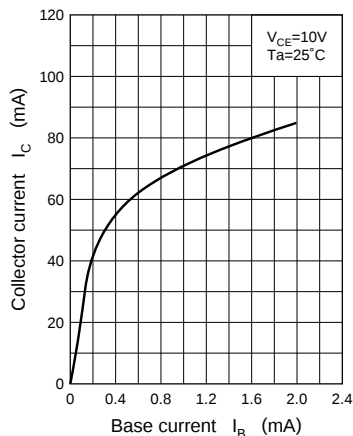
$I_C - V_{CE}$



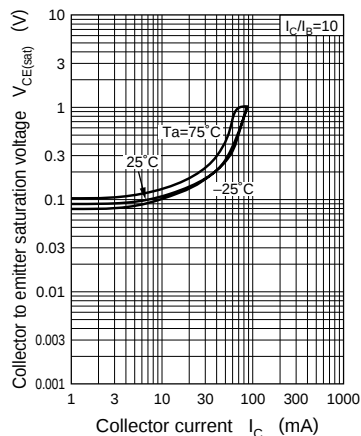
$I_C - V_{BE}$



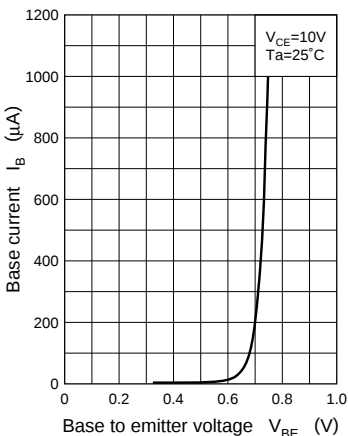
$I_C - I_B$



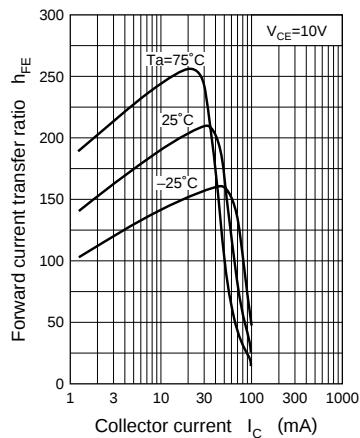
$V_{CE(sat)} - I_C$



$I_B - V_{BE}$



$h_{FE} - I_C$



$C_{ob} - V_{CB}$

