

2SC4543

Silicon NPN epitaxial planer type

For video amplifier

Features

- High transition frequency f_T .
- Small collector output capacitance C_{ob} .
- Wide current range.

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rated	Unit
Collector to base voltage	V_{CBO}	110	V
Collector to emitter voltage	V_{CER}^{*1}	100	V
Collector to emitter voltage	V_{CEO}	50	V
Emitter to base voltage	V_{EBO}	3.5	V
Peak collector current	I_{CP}	300	mA
Collector current	I_C	150	mA
Collector power dissipation	P_C^{*2}	1.0	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

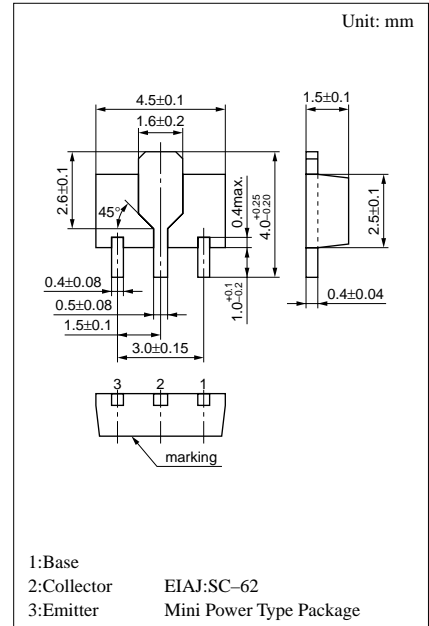
*1 $R_{EB} = 1.2k\Omega$

*2 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)

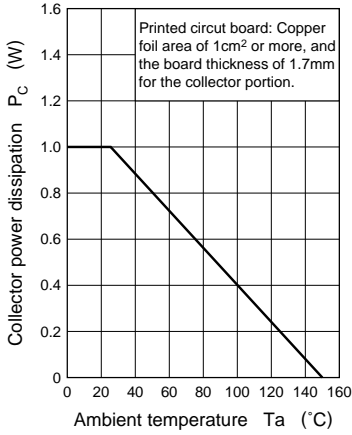
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CEO}	$V_{CE} = 35V, I_B = 0$			10	μA
Collector to base voltage	V_{CBO}	$I_C = 100\mu A, I_E = 0$	110			V
Collector to emitter voltage	V_{CER}	$I_C = 500\mu A, R_{BE} = 470\Omega$	100			V
	V_{CEO}	$I_C = 1mA, I_B = 0$	50			V
Emitter to base voltage	V_{EBO}	$I_E = 100\mu A, I_C = 0$	3.5			V
Forward current transfer ratio	h_{FE}	$V_{CE} = 5V, I_C = 100mA^*$	20			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 150mA, I_B = 15mA^*$			0.5	V
Transition frequency	f_{T1}	$V_{CB} = 10V, I_E = -10mA, f = 200MHz$		300		MHz
	f_{T2}	$V_{CB} = 10V, I_E = -110mA^*, f = 200MHz$		350		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 30V, I_E = 0, f = 1MHz$		3		pF

* Pulse measurement

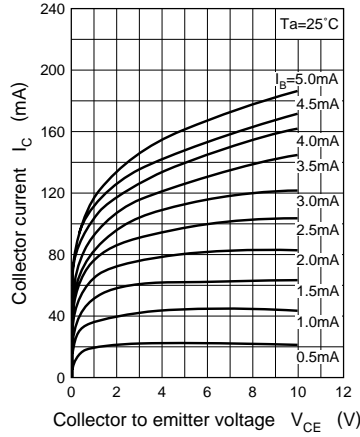


Marking symbol : 1F

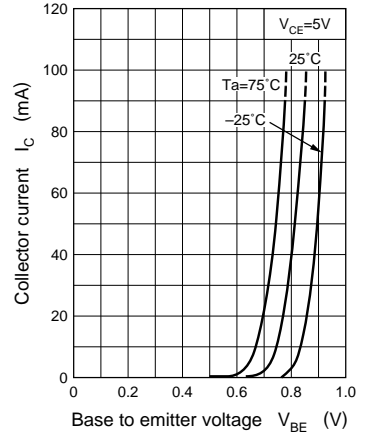
$P_C - T_a$



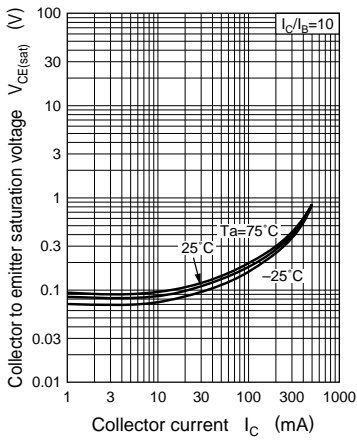
$I_C - V_{CE}$



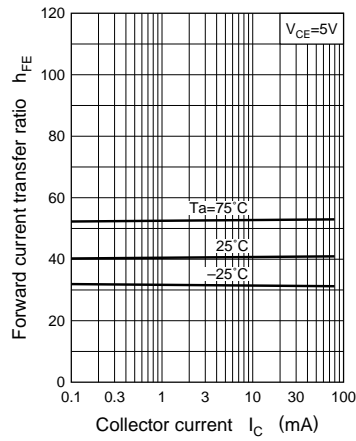
$I_C - V_{BE}$



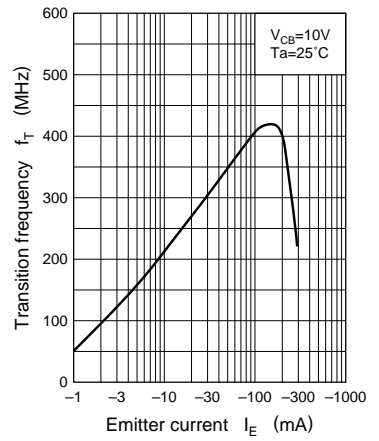
$V_{CE(sat)} - I_C$



$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$

