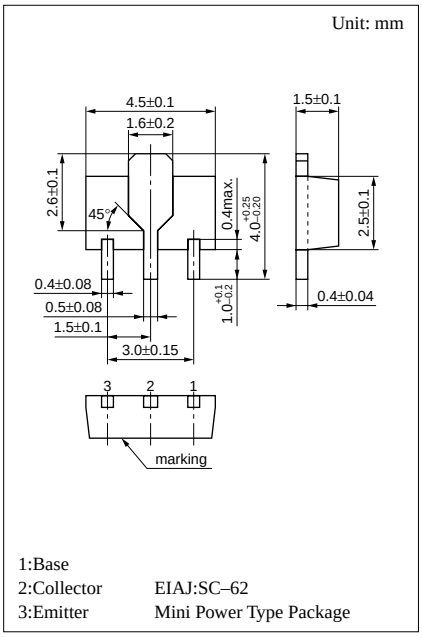
2SC4543

Silicon NPN epitaxial planer type

For video amplifier



Marking symbol : 1F

Features

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

Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	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} = 1.2kΩ

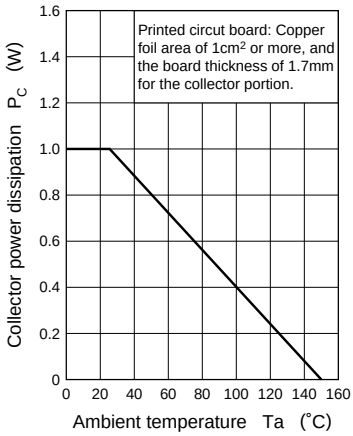
*2 Printed circuit board: Copper foil area of 1cm^2 or more, and the board thickness of 1.7mm for the collector portion

Electrical Characteristics (Ta=25˚C)

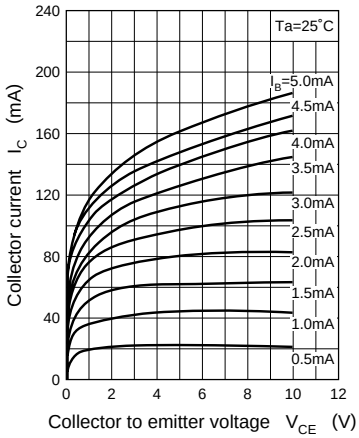
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CEO}	V_{CE} = 35V, I_B = 0			10	μA
Collector to base voltage	V_{CBO}	I_C = 100μA, I_E = 0	110			V
Collector to emitter voltage	V_{CER}	I_C = 500μA, R_{BE} = 470Ω	100			V
	V_{CEO}	I_C = 1mA, I_B = 0	50			V
Emitter to base voltage	V_{EBO}	I_E = 100μA, 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

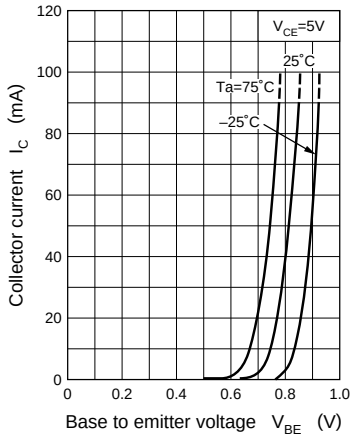
P_C — Ta



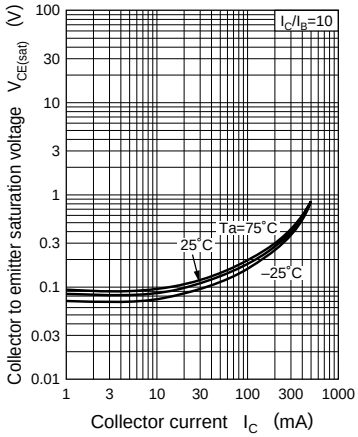
I_C — V_{CE}



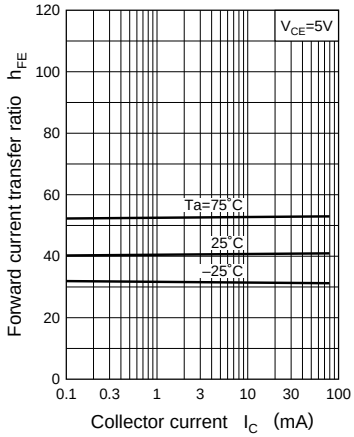
I_C — V_{BE}



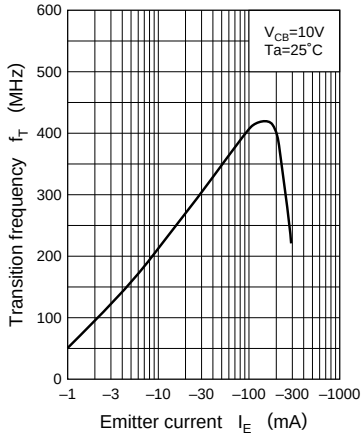
$V_{CE(sat)}$ — I_C



h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}