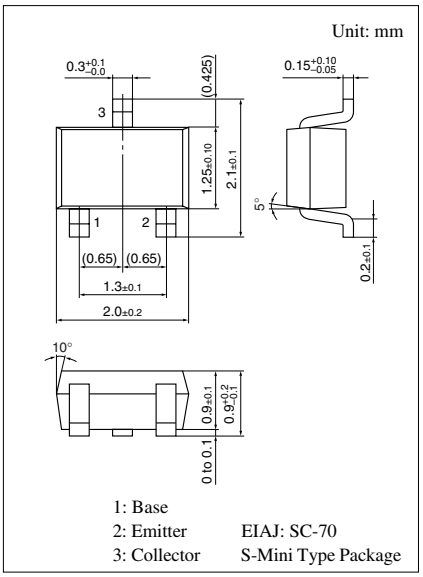
2SC3932

Silicon NPN epitaxial planer type

For high-frequency amplification / oscillation / mixing



Marking Symbol: R

■ Features

- High transition frequency f_T
- S-mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

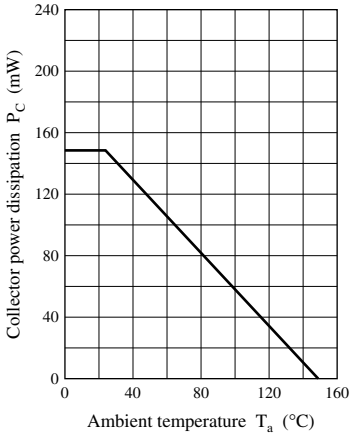
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to base voltage	V_{CBO}	I_C = 100 µA, I_E = 0	30			V
Emitter to base voltage	V_{EBO}	I_E = 10 µA, I_C = 0	3			V
Forward current transfer ratio	h_{FE}	V_{CB} = 10 V, I_E = −2 mA	25		250	
Base to emitter voltage	V_{BE}	V_{CB} = 10 V, I_E = −2 mA		720		mV
Transition frequency *	f_T	V_{CB} = 10 V, I_E = −15 mA, f = 200 MHz	800		1 600	MHz
Common emitter reverse transfer capacitance	C_{re}	V_{CB} = 10 V, I_E = −1 mA, f = 10.7 MHz		1	1.5	pF
	C_{rb}	V_{CE}= 6 V, I_C = 0, f = 1 MHz		0.8		pF
Power gain	PG	V_{CB} = 10 V, I_E = −1 mA, f = 200 MHz		20		dB

Note) *: Rank classification

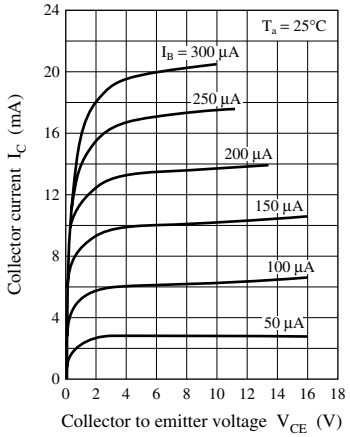
Rank	T	S	No-rank
f_T (MHz)	800 to 1 400	1 000 to 1 600	800 to 1 600
Marking symbol	RT	RS	R

Product of no-rank is not classified and have no indication for rank.

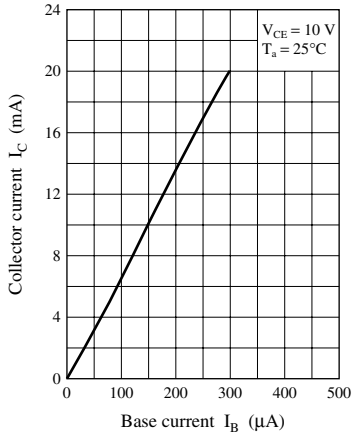
P_C — T_a



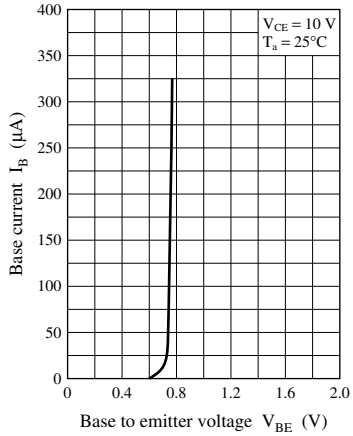
I_C — V_{CE}



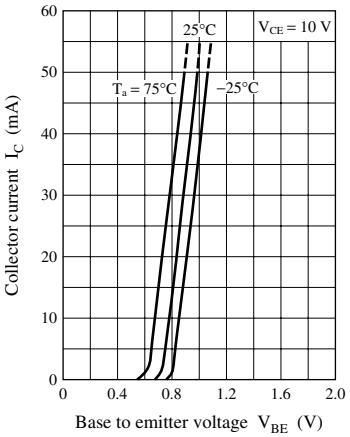
I_C — I_B



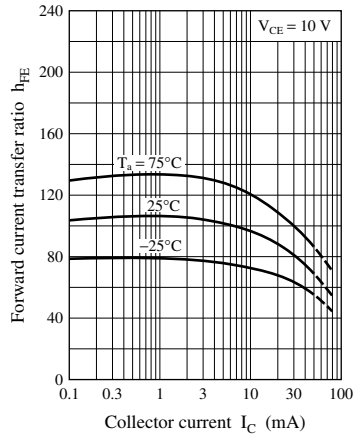
I_B — V_{BE}



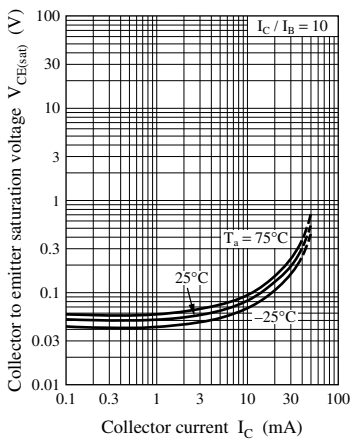
I_C — V_{BE}



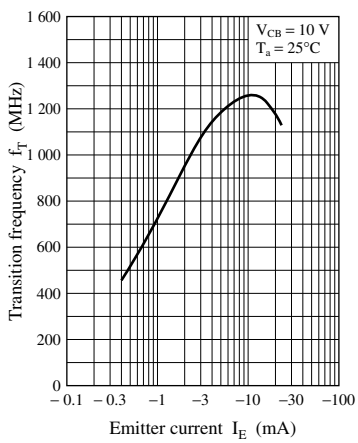
h_{FE} — I_C



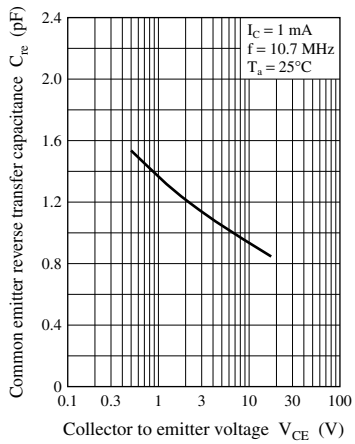
$V_{CE(sat)}$ — I_C



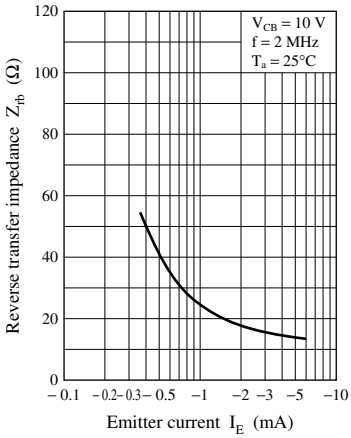
f_T — I_E



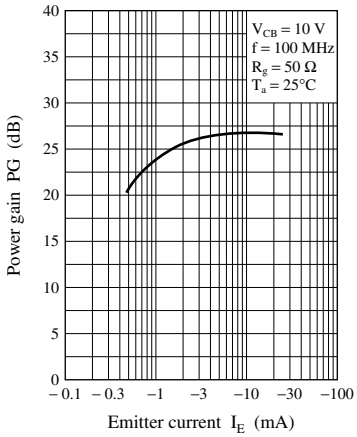
C_{re} — V_{CE}



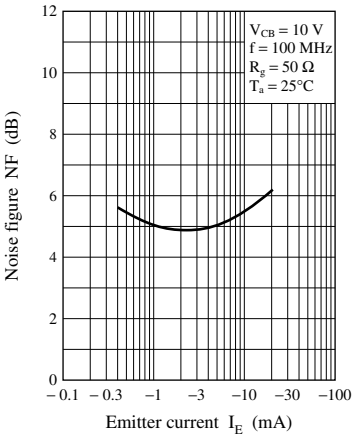
Z_{rb} — I_E



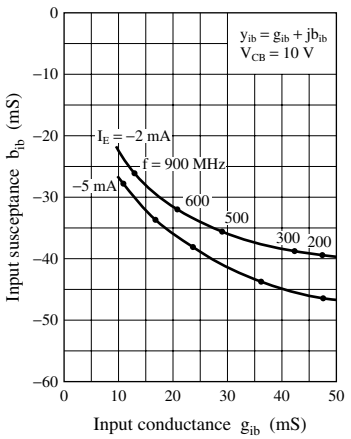
PG — I_E



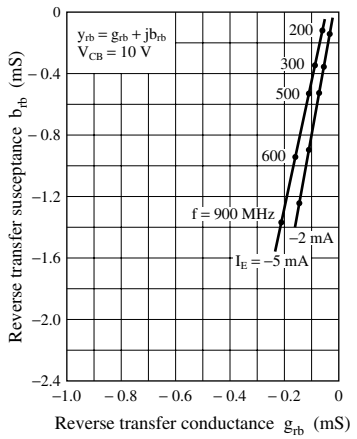
NF — I_E



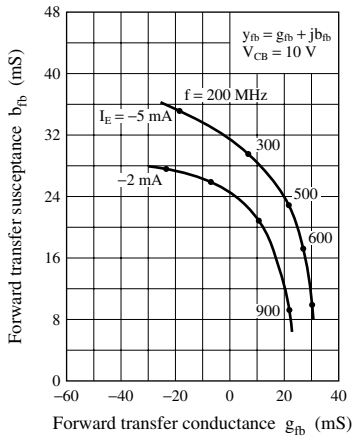
b_{ib} — g_{ib}



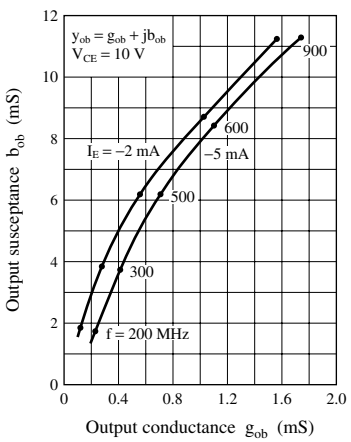
b_{rb} — g_{rb}



b_{fb} — g_{fb}



b_{ob} — g_{ob}



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