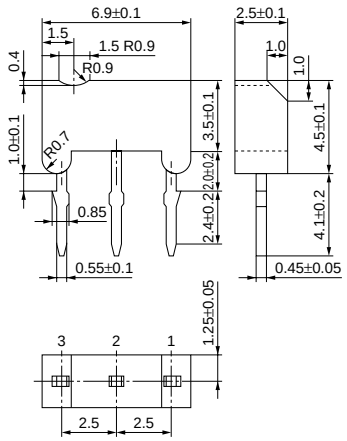
2SC2377

Silicon NPN epitaxial planer type

For high-frequency amplification

Unit: mm



1:Base
2:Collector
3:Emitter

EIAJ:SC–71
M Type Mold Package

Features

- Optimum for RF amplification of FM/AM radios.
- High transition frequency f_T.
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	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	15	mA
Collector power dissipation	P_C	400	mW
Junction temperature	T_j	150	˚C
Storage temperature	T_{stg}	–55 ~ +150	˚C

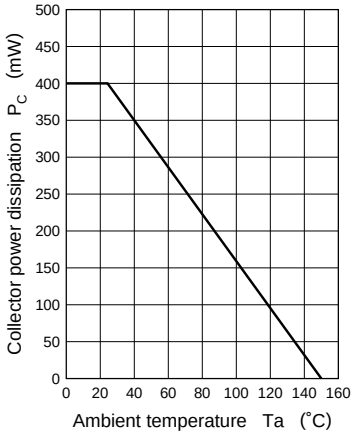
Electrical Characteristics (Ta=25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 10V, I_E = 0			100	nA
	I_{CEO}	V_{CE} = 20V, I_B = 0			10	µA
Emitter cutoff current	I_{EBO}	V_{EB} = 3V, I_C = 0			1	µA
Forward current transfer ratio	h_{FE}*	V_{CB} = 6V, I_E = –1mA	65		260	
Base to emitter voltage	V_{BE}	V_{CB} = 6V, I_E = –1mA		720		mV
Transition frequency	f_T	V_{CB} = 6V, I_E = –1mA, f = 100MHz	450	650		MHz
Noise figure	NF	V_{CB} = 6V, I_E = –1mA		3.3	5	dB
Power gain	PG	V_{CB} = 6V, I_E = –1mA	20	24		dB
Common emitter reverse transfer capacitance	C_{re}	V_{CE} = 6V, I_C = 1mA		0.8	1	pF

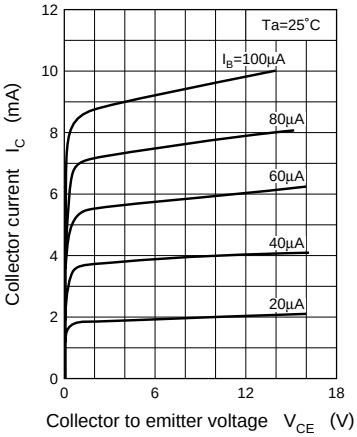
*h_{FE} Rank classification

Rank	C	D
h_{FE}	65 ~ 160	100 ~ 260

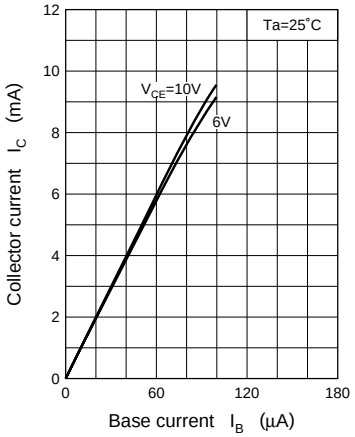
P_C — Ta



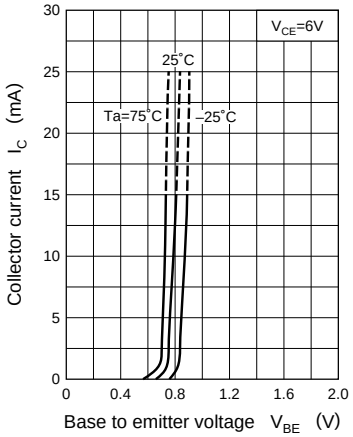
I_C — V_{CE}



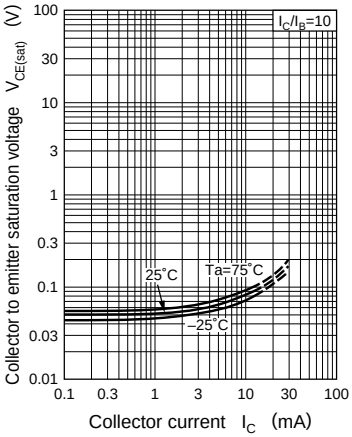
I_C — I_B



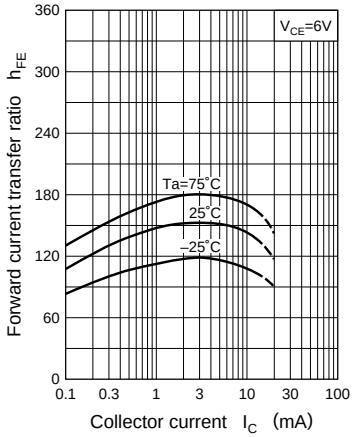
I_C — V_{BE}



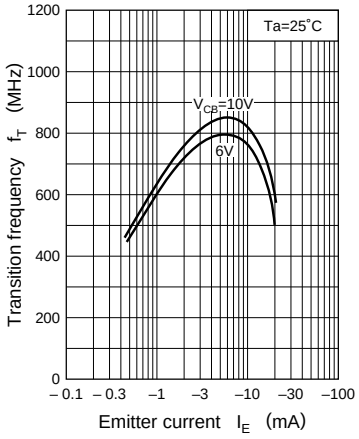
$V_{CE(sat)}$ — I_C



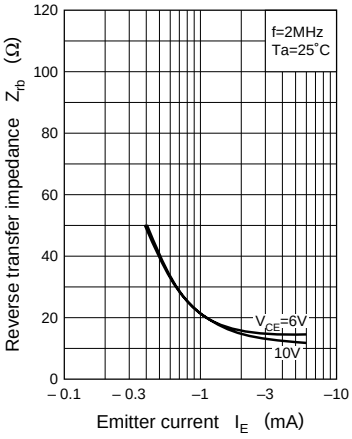
h_{FE} — I_C



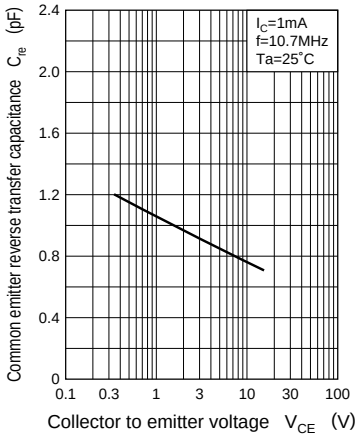
f_T — I_E



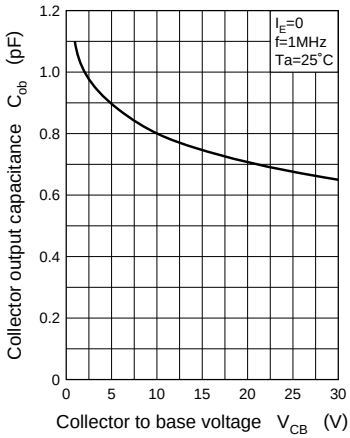
Z_{rb} — I_E



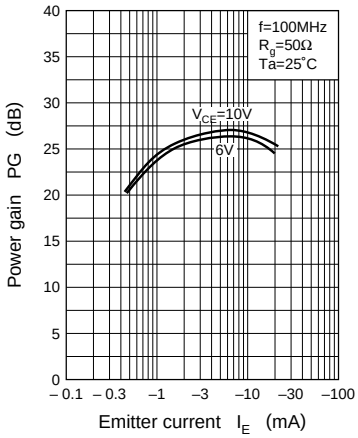
C_{re} — V_{CE}



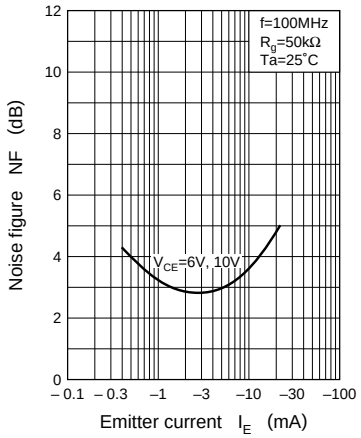
C_{ob} — V_{CB}



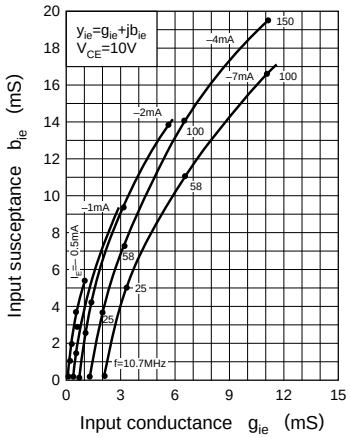
PG — I_E



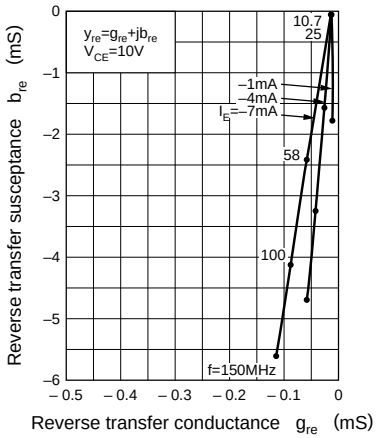
NF — I_E



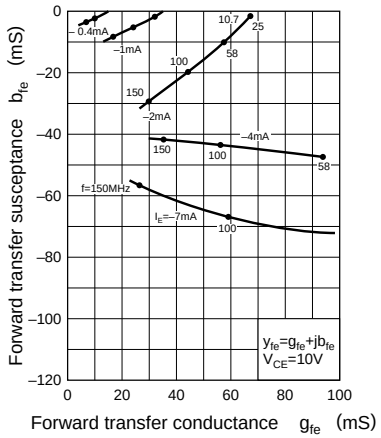
b_{ie} — g_{ie}



b_{re} — g_{re}



b_{fe} — g_{fe}



b_{oe} — g_{oe}

