

2SC1359

Silicon NPN epitaxial planer type

For high-frequency amplification

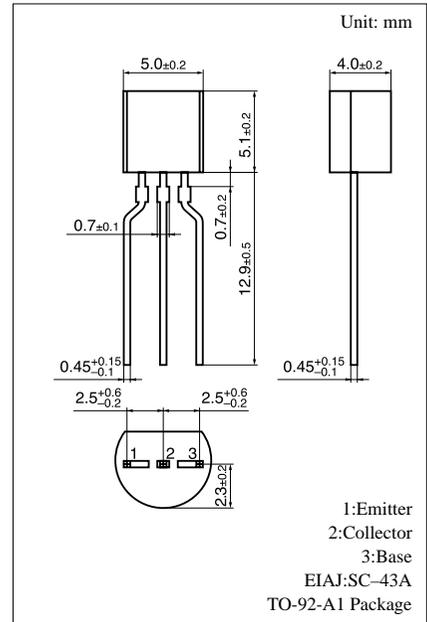
Complementary to 2SA838

Features

- Optimum for RF amplification of FM/AM radios.
- High transition frequency f_T .

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}	5	V
Collector current	I_C	30	mA
Collector power dissipation	P_C	400	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C



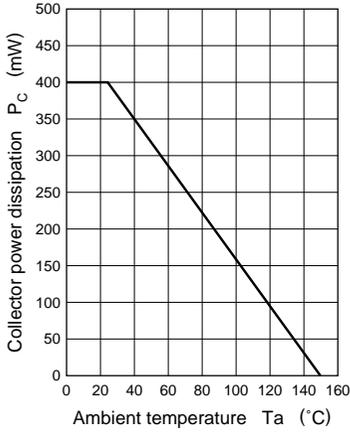
Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 10V, I_E = 0$			0.1	μA
Forward current transfer ratio	h_{FE}^*	$V_{CB} = 10V, I_E = -1mA$	70		220	
Transition frequency	f_T	$V_{CB} = 10V, I_E = -1mA, f = 200MHz$	150	250		MHz
Noise figure	NF	$V_{CB} = 10V, I_E = -1mA, f = 5MHz$		2.8	4	dB
Reverse transfer impedance	Z_{rb}	$V_{CB} = 10V, I_E = -1mA, f = 2MHz$		22	50	Ω
Common emitter reverse transfer capacitance	C_{re}	$V_{CE} = 10V, I_C = 1mA, f = 10.7MHz$		0.9	1.5	pF

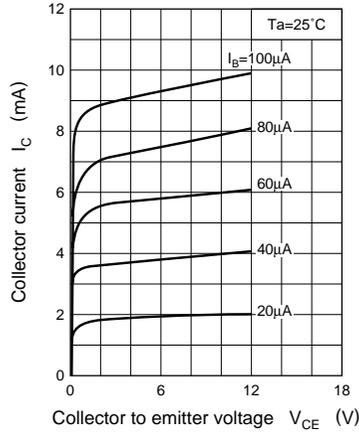
* h_{FE} Rank classification

Rank	B	C
h_{FE}	70 ~ 140	110 ~ 220

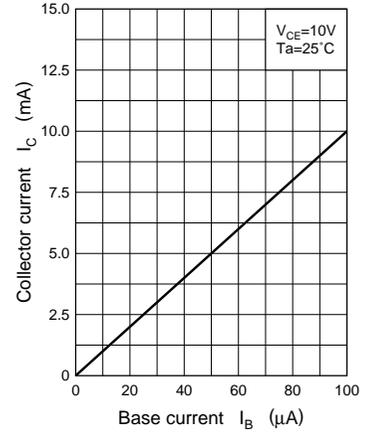
$P_C - T_a$



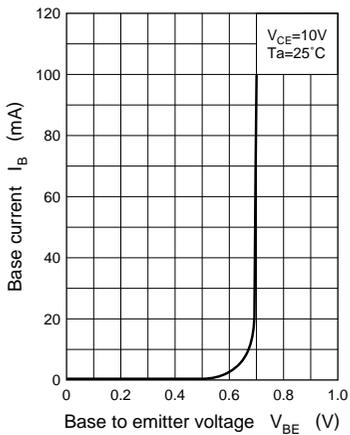
$I_C - V_{CE}$



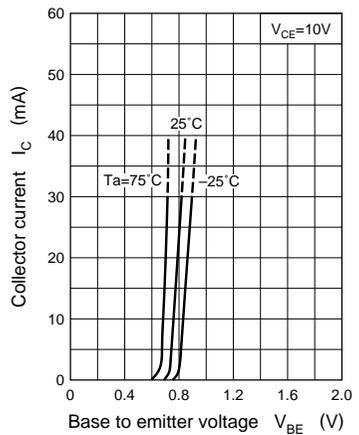
$I_C - I_B$



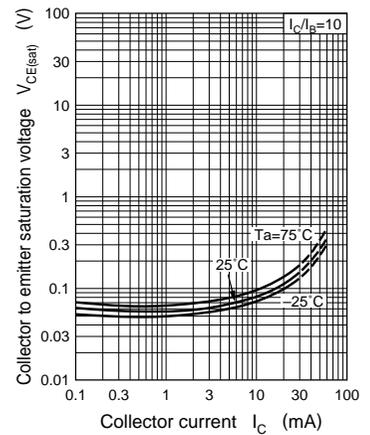
$I_B - V_{BE}$



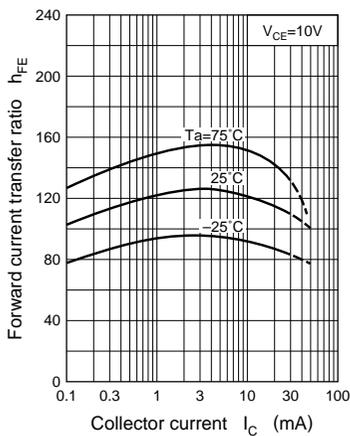
$I_C - V_{BE}$



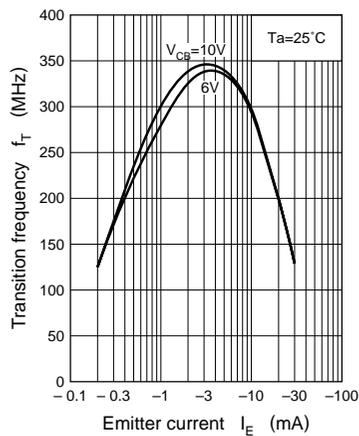
$V_{CE(sat)} - I_C$



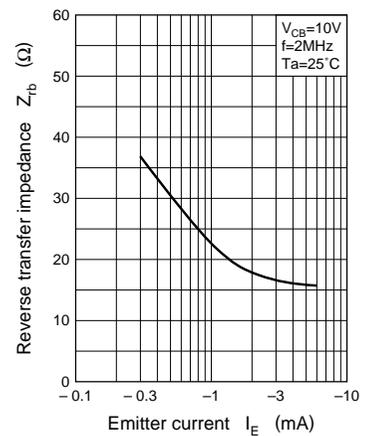
$h_{FE} - I_C$

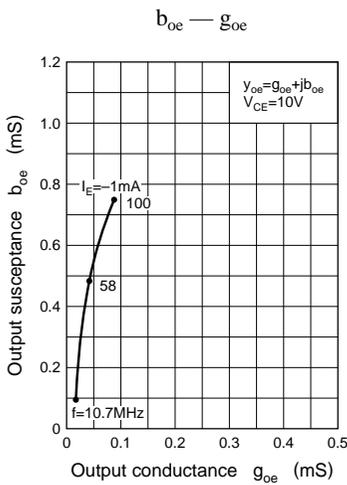
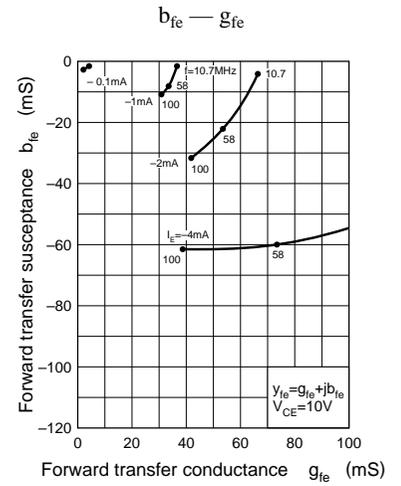
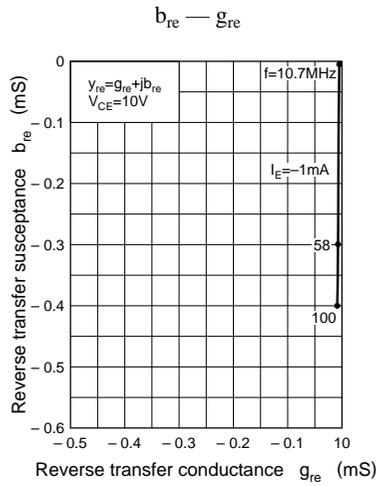
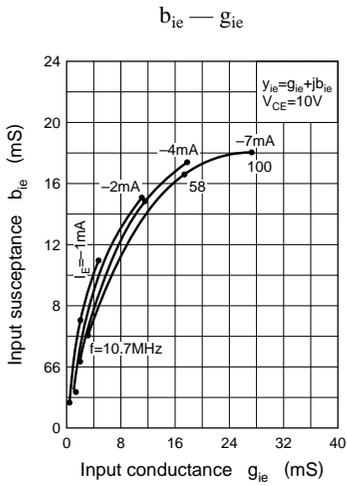
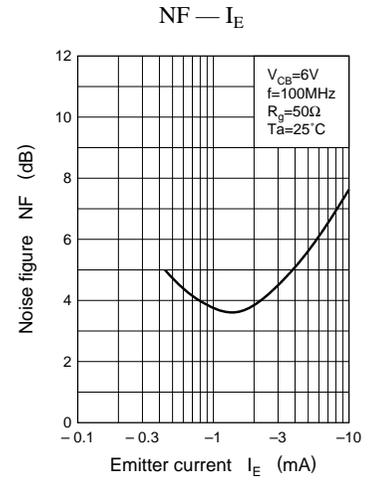
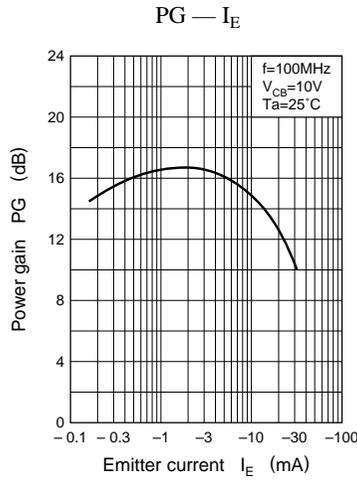
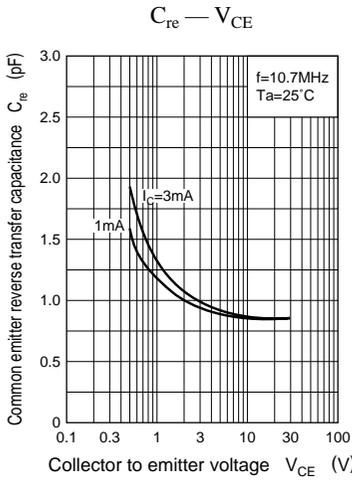


$f_T - I_E$



$Z_{rb} - I_E$





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