

Description

- RF amplifier

Features

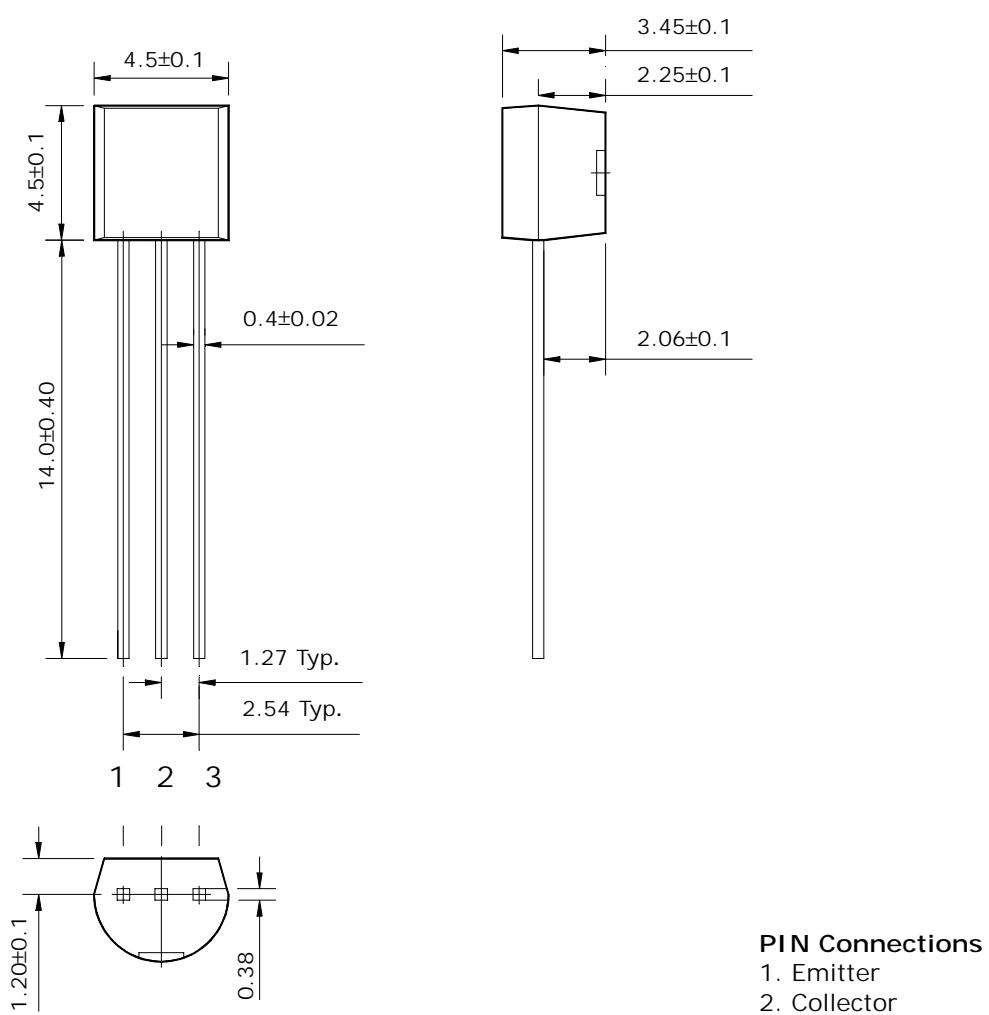
- High current transition frequency
 $f_T=550\text{MHz}(\text{Typ.})$, [$V_{CE}=6\text{V}$, $I_E=-1\text{mA}$]
- Low output capacitance :
 $C_{ob}=1.4\text{pF}(\text{Typ.})$ [$V_{CB}=6\text{V}$, $I_E=0$]
- Low base time constant and high gain
- Excellent noise response

Ordering Information

Type NO.	Marking	Package Code
2SC5345	C5345	TO-92

Outline Dimensions

unit : mm



Absolute maximum ratings

Ta=25°C

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V _{CBO}	30	V
Collector-Emitter voltage	V _{CEO}	20	V
Emitter-Base voltage	V _{EBO}	4	V
Collector current	I _C	20	mA
Collector dissipation	P _C	625	mW
Junction temperature	T _j	150	°C
Storage temperature range	T _{stg}	-55~150	°C

Electrical Characteristics

Ta=25°C

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV _{CBO}	I _C =10μA, I _E =0	30	-	-	V
Collector-Emitter breakdown voltage	BV _{CEO}	I _C =5mA, I _B =0	20	-	-	V
Emitter-Base breakdown voltage	BV _{EBO}	I _E =10μA, I _C =0	4	-	-	V
Collector cut-off current	I _{CBO}	V _{CB} =30V, I _E =0	-	-	0.5	μA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0	-	-	0.5	μA
DC current gain	h _{FE} [*]	V _{CE} =6V, I _C =1mA	40	-	240	-
Collector-Emitter saturation voltage	V _{CE(sat)}	I _C =10mA, I _B =1mA	-	-	0.3	V
Transition frequency	f _T	V _{CE} =6V, I _E =-1mA	-	550	-	MHz
Collector output capacitance	C _{ob}	V _{CB} =6V, I _E =0, f=1MHz	-	1.4	-	pF

* : h_{FE} rank / R : 40~80, O : 70~140, Y : 120~240

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

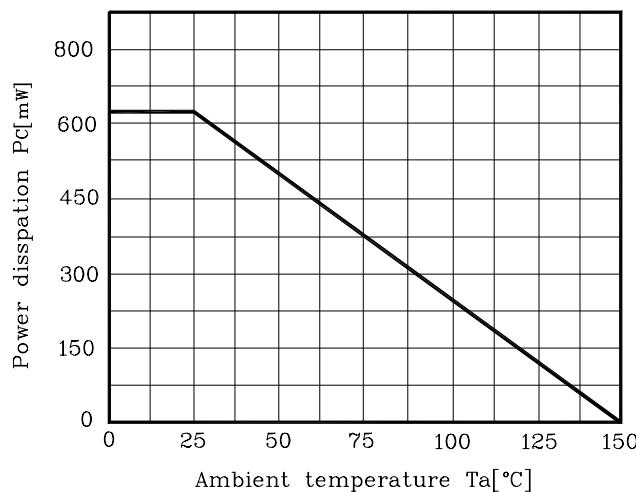


Fig. 2 $I_C - V_{CE}$

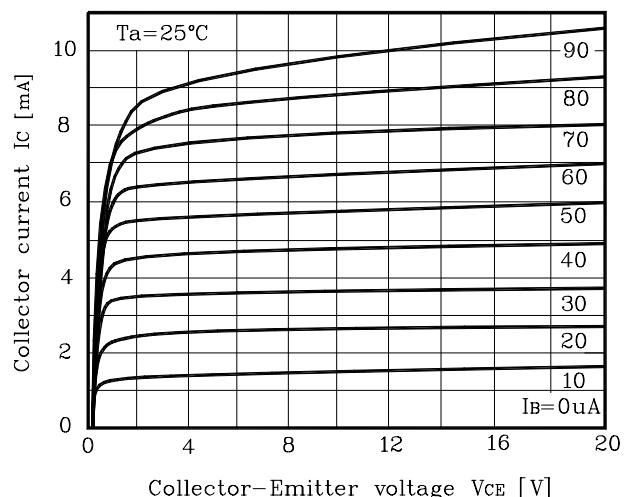


Fig. 3 $h_{FE} - I_C$

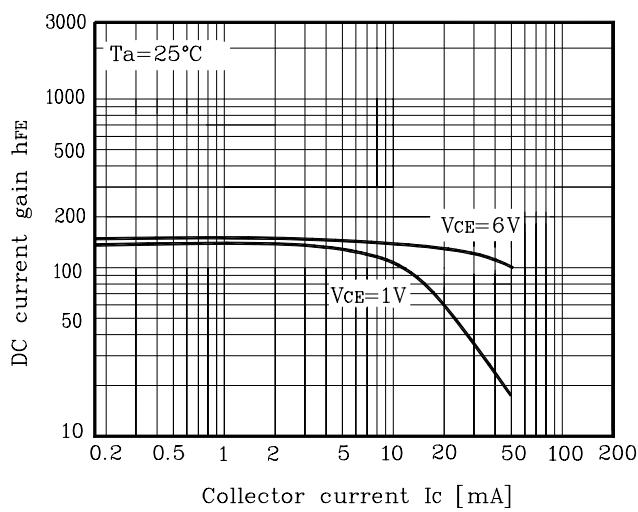


Fig. 4 $f_T - I_E$

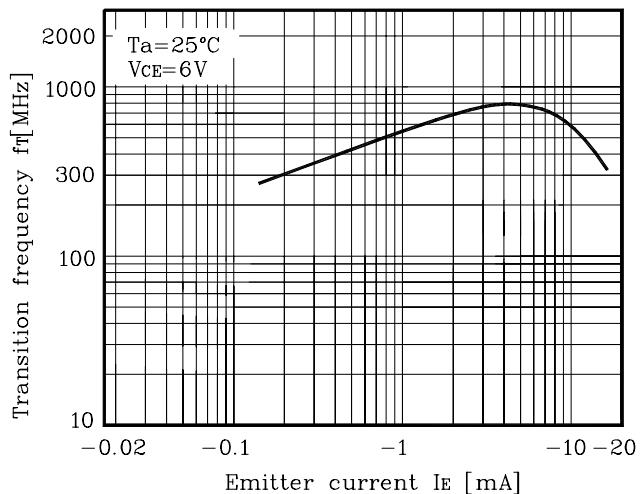


Fig. 5 $C_{ob}-V_{CB}, C_{ib}-V_{EB}$

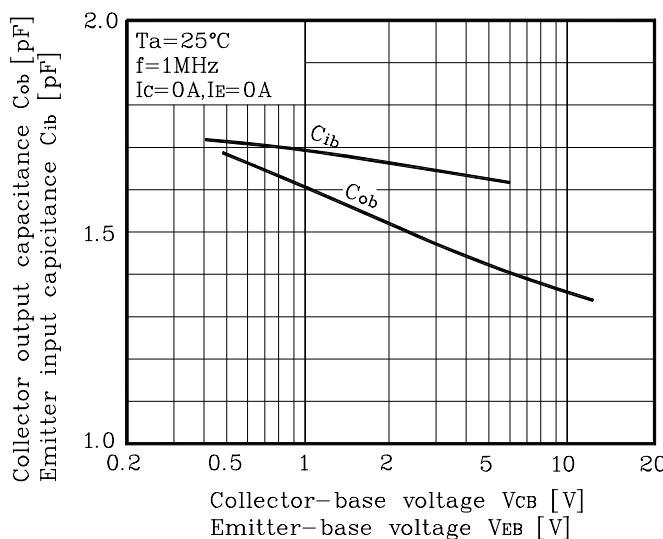
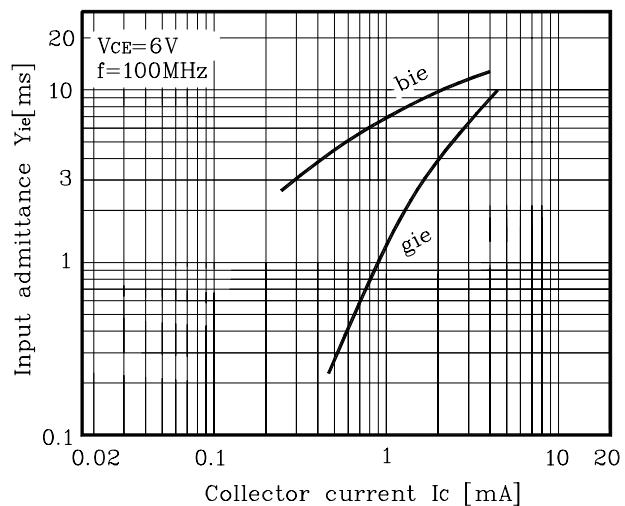
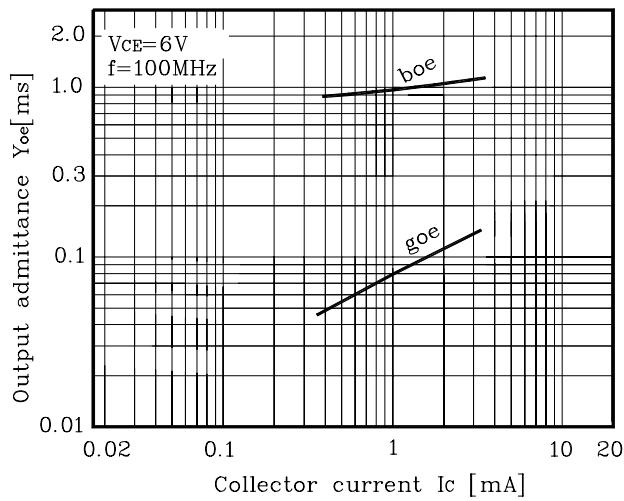
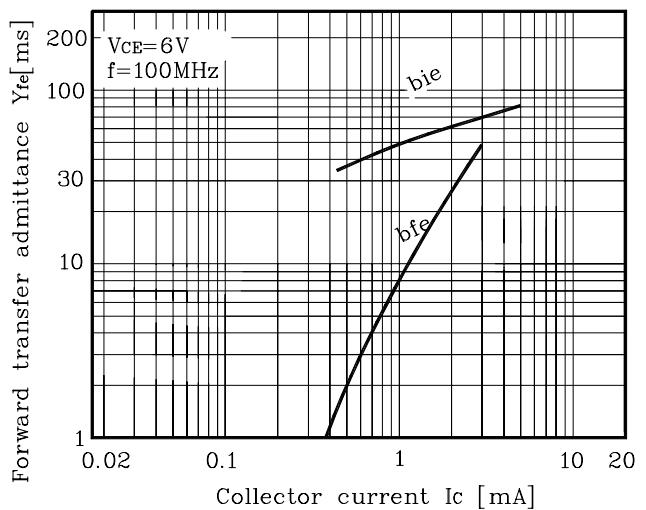


Fig. 6 $Y_{ie}-I_C$



Electrical Characteristic Curves

Fig. 7 I_C - Y_{oe} **Fig. 8 I_C - Y_{fe}** **Fig. 9 I_C - Y_{re}** 