

Description

- RF amplifier

Features

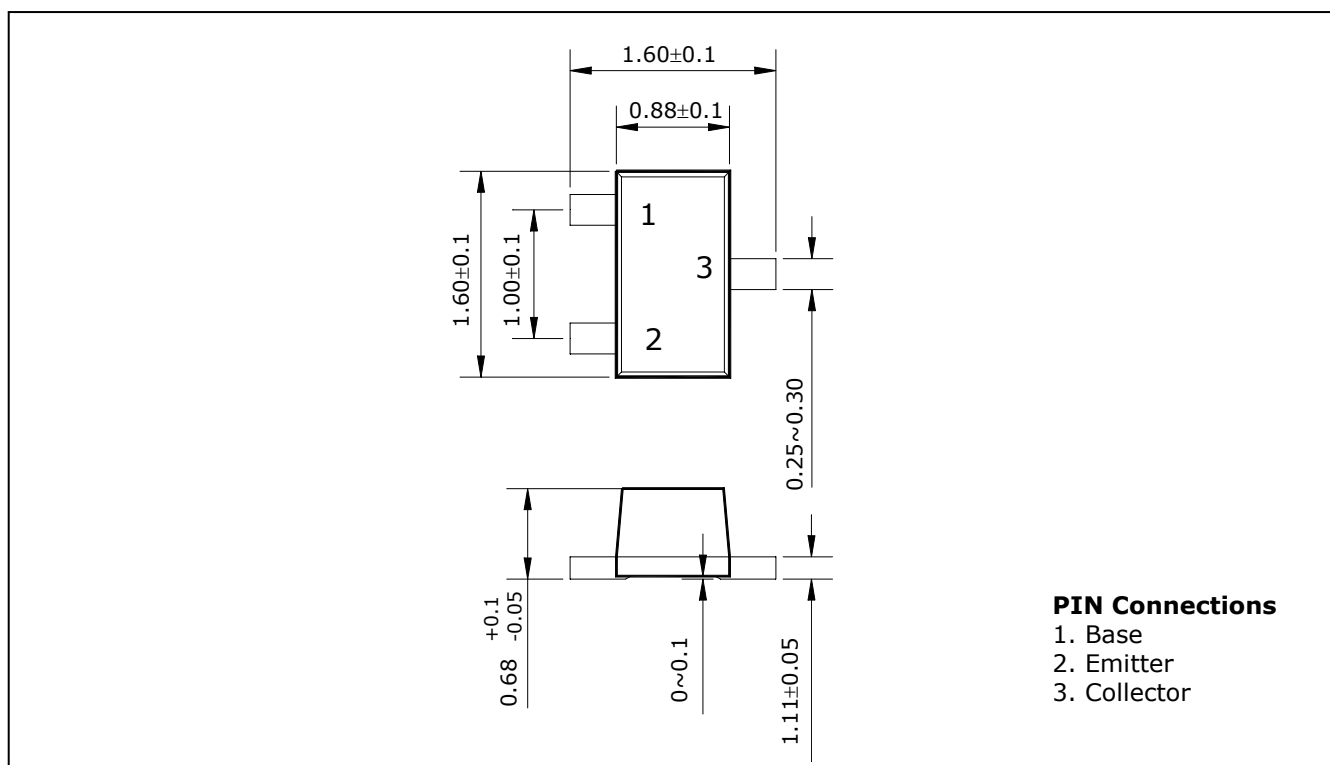
- High current transition frequency
 $f_T = 550\text{MHz(Typ.)}$, [$V_{CE} = 6\text{V}$, $I_E = -1\text{mA}$]
- Low output capacitance :
 $C_{ob} = 1.4\text{pF(Typ.)}$ [$V_{CB} = 6\text{V}$, $I_E = 0$]
- Low base time constant and high gain
- Excellent noise response

Ordering Information

Type NO.	Marking	Package Code
2SC5345E	Z□ □ : h_{FE} rank	SOT-523F

Outline Dimensions

unit : mm



Absolute maximum ratings $T_a=25^{\circ}\text{C}$

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}	150	mW
Junction temperature	T_{j}	150	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	-55~150	$^{\circ}\text{C}$

Electrical Characteristics $T_a=25^{\circ}\text{C}$

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	$I_{\text{C}}=10\mu\text{A}$, $I_{\text{E}}=0$	30	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_{\text{C}}=5\text{mA}$, $I_{\text{B}}=0$	20	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_{\text{E}}=10\mu\text{A}$, $I_{\text{C}}=0$	4	-	-	V
Collector cut-off current	I_{CBO}	$V_{\text{CB}}=30\text{V}$, $I_{\text{E}}=0$	-	-	0.5	μA
Emitter cut-off current	I_{EBO}	$V_{\text{EB}}=4\text{V}$, $I_{\text{C}}=0$	-	-	0.5	μA
DC current gain	h_{FE}^*	$V_{\text{CE}}=6\text{V}$, $I_{\text{C}}=1\text{mA}$	40	-	240	-
Collector-Emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}}=10\text{mA}$, $I_{\text{B}}=1\text{mA}$	-	-	0.3	V
Transition frequency	f_{T}	$V_{\text{CE}}=6\text{V}$, $I_{\text{E}}=-1\text{mA}$	-	550	-	MHz
Collector output capacitance	C_{ob}	$V_{\text{CB}}=6\text{V}$, $I_{\text{E}}=0$, $f=1\text{MHz}$	-	1.4	-	pF

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

Electrical Characteristic Curves

Fig. 1 P_C - T_a

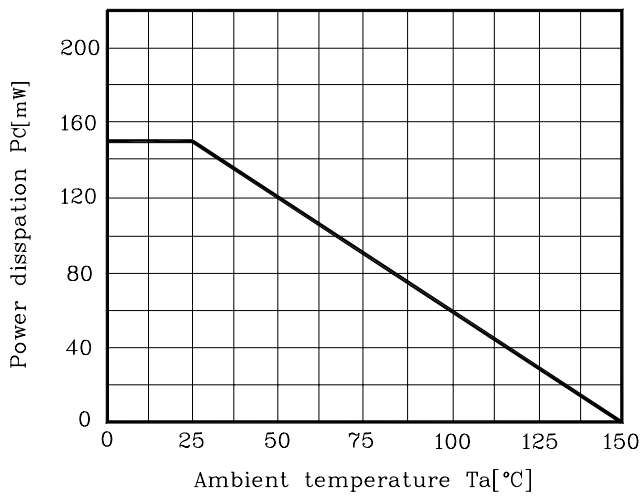


Fig. 2 I_C - V_{CE}

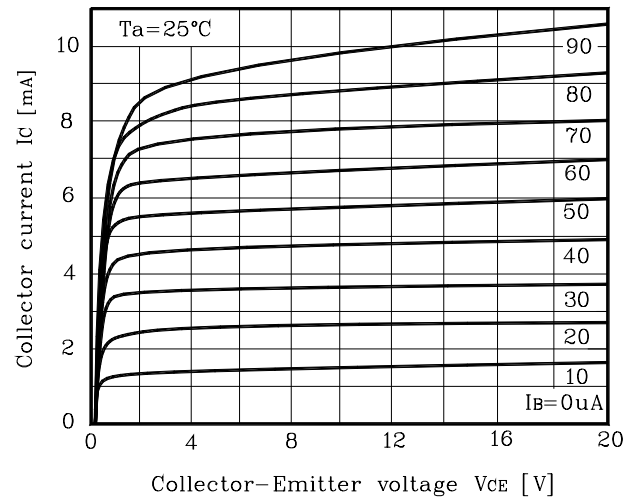


Fig. 3 h_{FE} - I_C

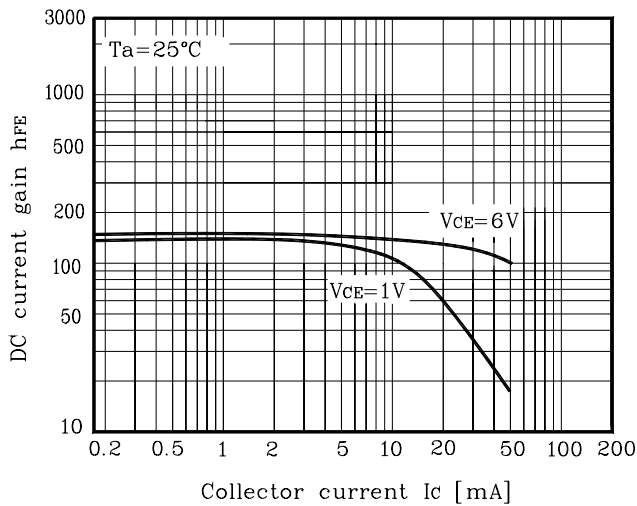


Fig. 4 f_T - I_E

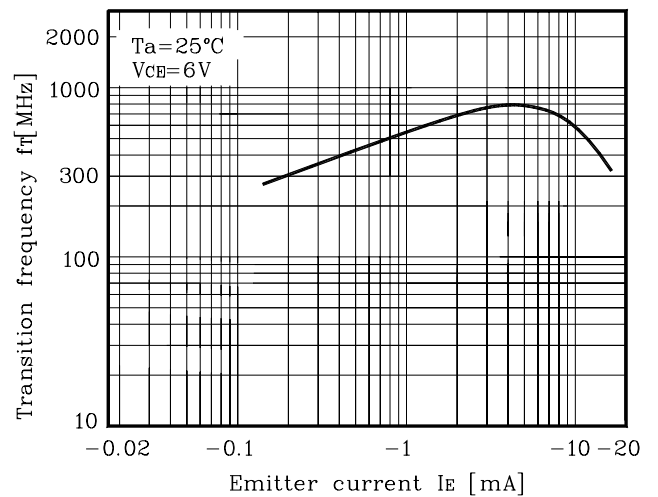


Fig. 5 C_{ob} - V_{CB} , C_{ib} - V_{EB}

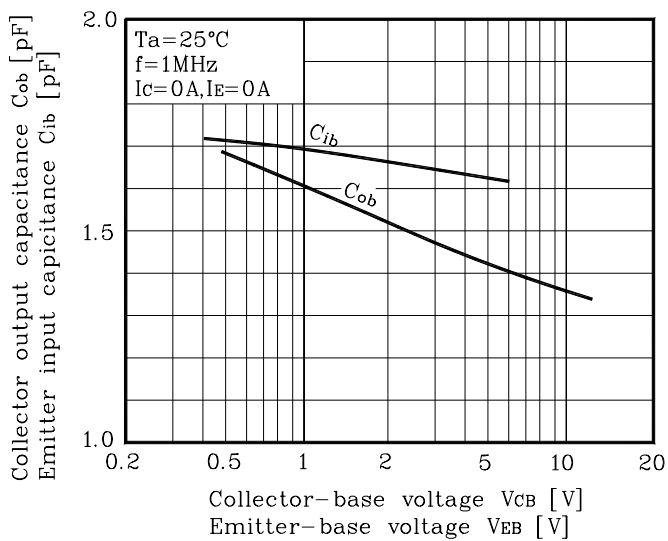
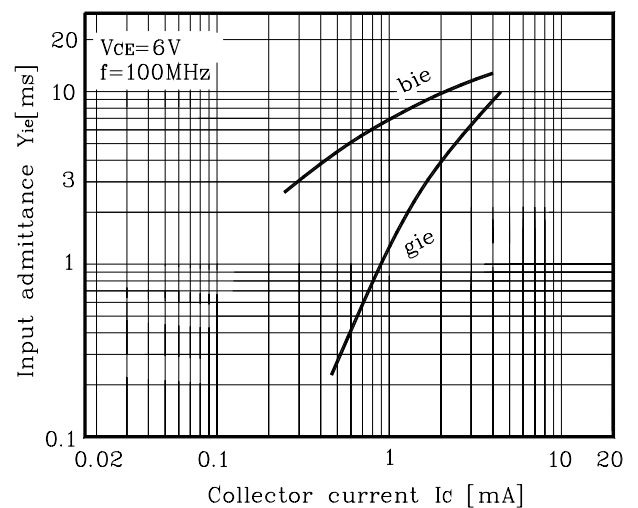


Fig. 6 Y_{ie} - I_C



Electrical Characteristic Curves

Fig. 7 I_C - Y_{oe}

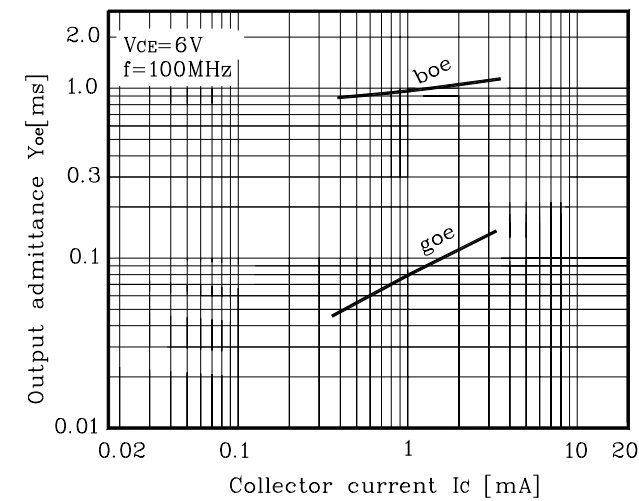


Fig. 8 I_C - Y_{fe}

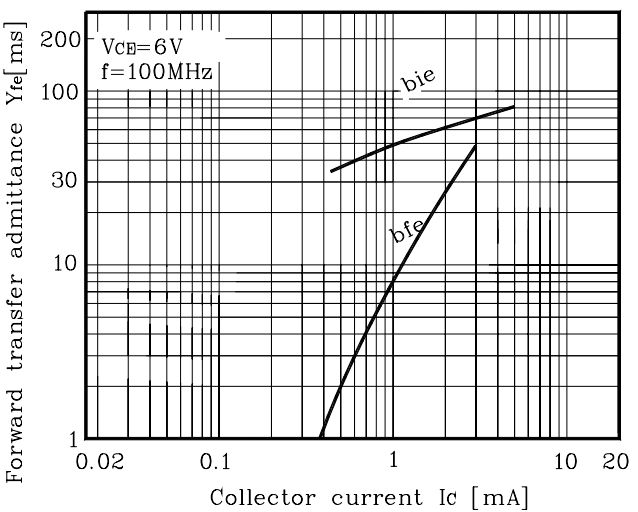


Fig. 9 I_C - Y_{re}

