AUK Semiconductor

2SC5345U

NPN Silicon Transistor

Description

- RF amplifier

Features

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

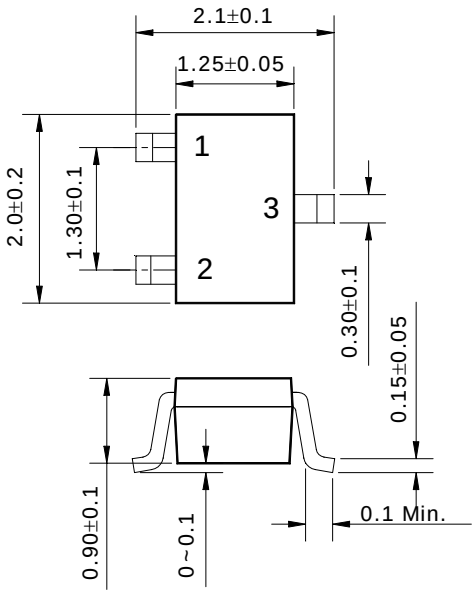
Ordering Information

Type NO.	Marking	Package Code
2SC5345U	E□	SOT-323

□ : h_{FE} rank

Outline Dimensions

unit : mm



PIN Connections
1. Base
2. Emitter
3. Collector

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	150	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

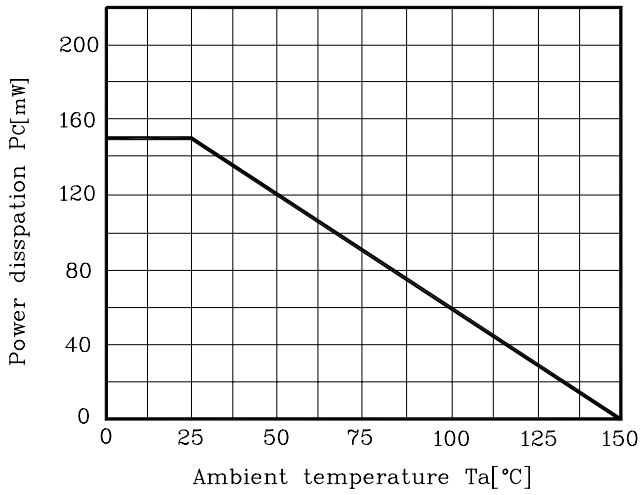


Fig. 2 I_C-V_{CE}

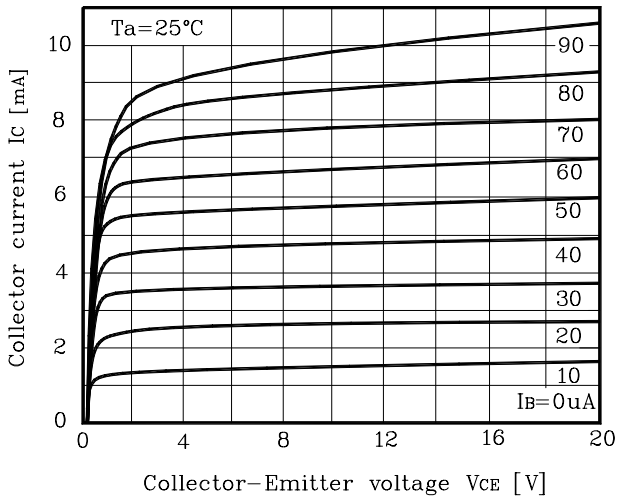


Fig. 3 h_{FE}-I_C

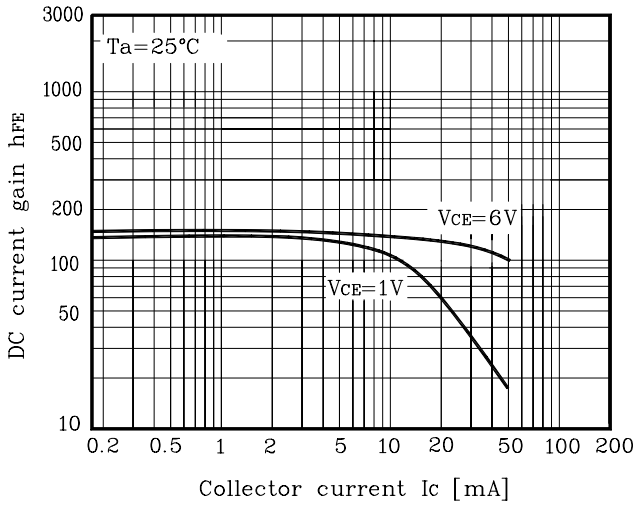


Fig. 4 f_T-I_E

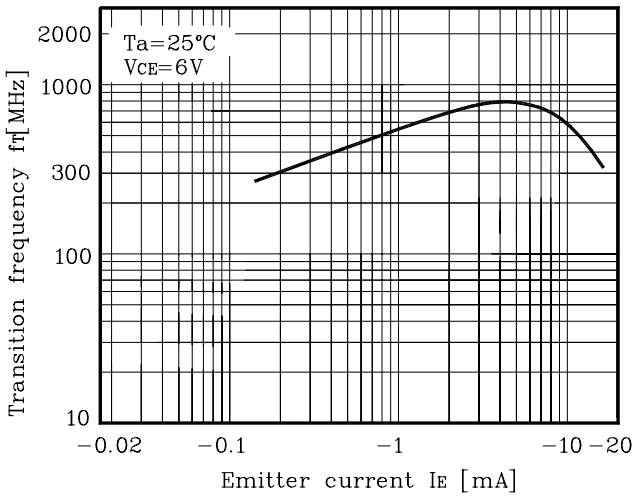


Fig. 5 C_{ob}-V_{CB}, C_{ib}-V_{EB}

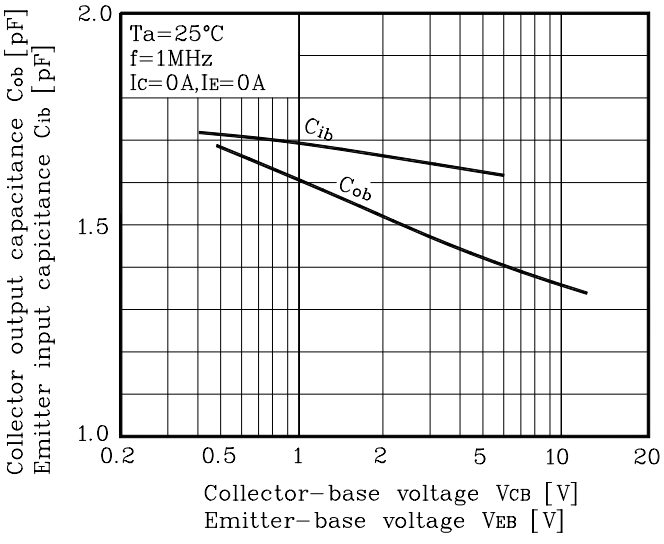
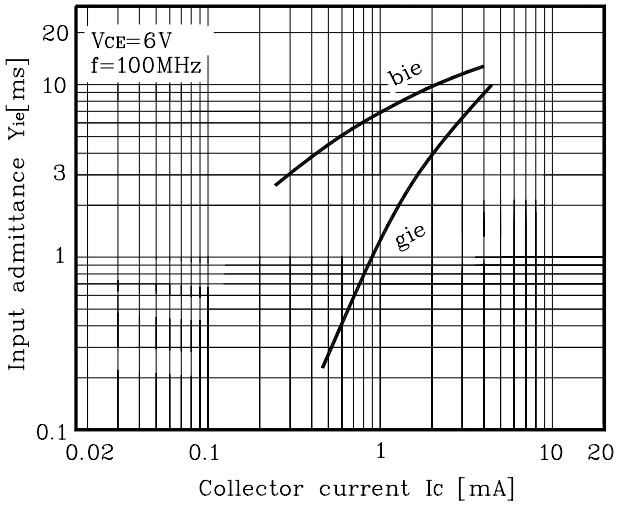


Fig. 6 Yie-I_C



Electrical Characteristic Curves

Fig. 7 I_C-Yoe

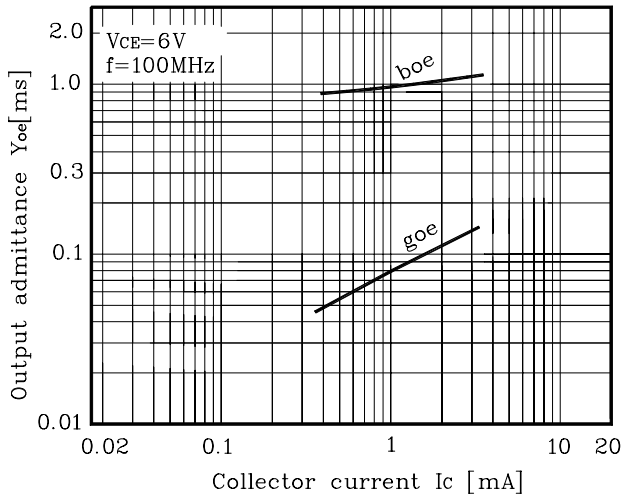


Fig. 8 I_C-Yfe

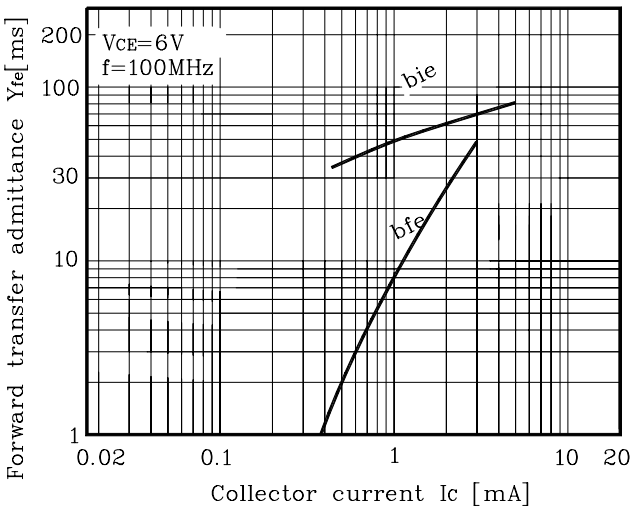


Fig. 9 I_C - Yre