KODENSHI AUK

2SC5345SF

NPN Silicon Transistor

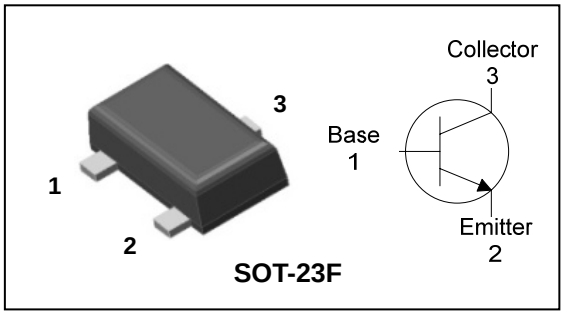
Description

- 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

PIN Connection



Ordering Information

Type NO.	Marking	Package Code
2SC5345SF	Z □ □ ① ② ③	SOT-23F

① Device Code ② hFE Rank ③ Year&Week Code

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
Transistor 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

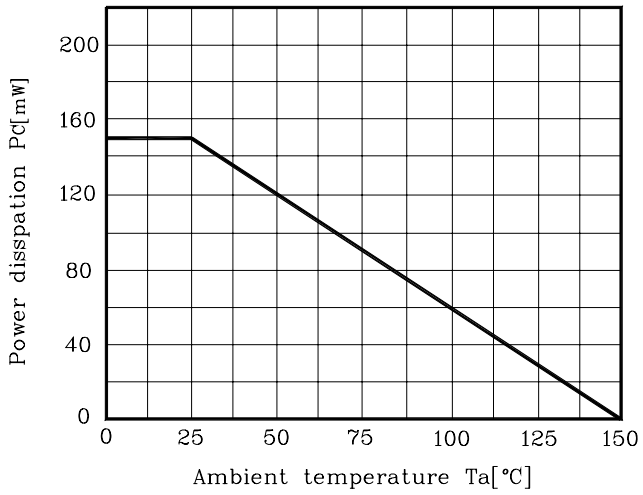


Fig. 2 I_C-V_{CE}

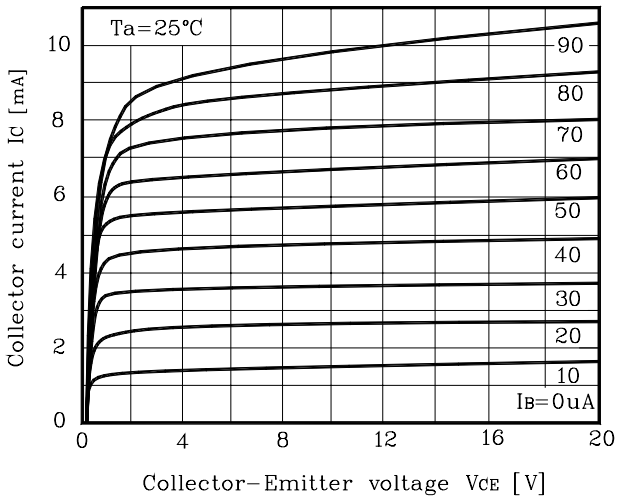


Fig. 3 h_{FE}-I_C

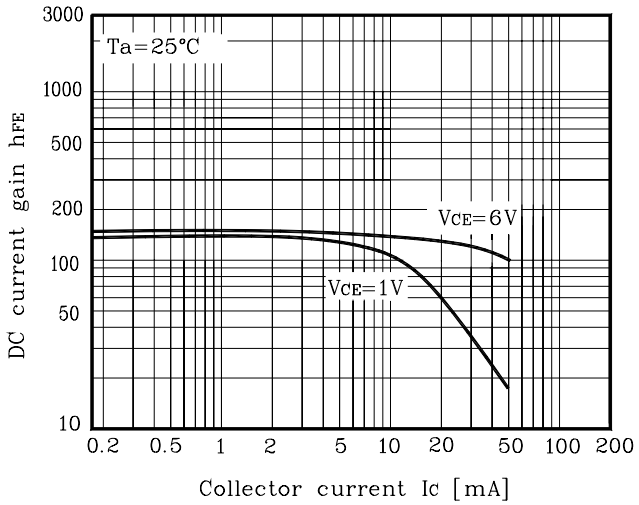


Fig. 4 f_T-I_E

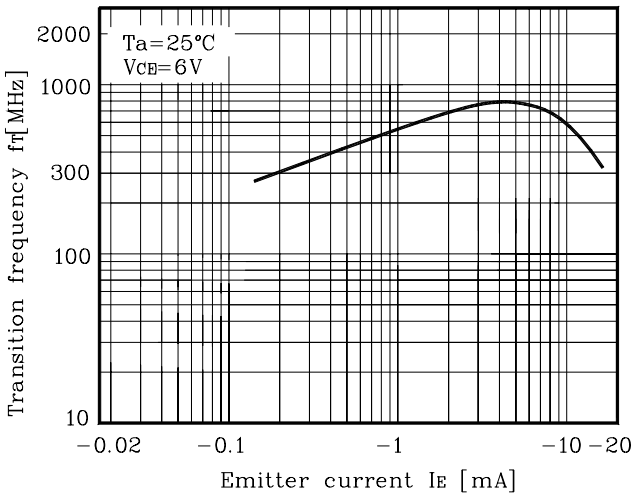


Fig. 5 C_{ob}-V_{CB}, C_{ib}-V_{EB}

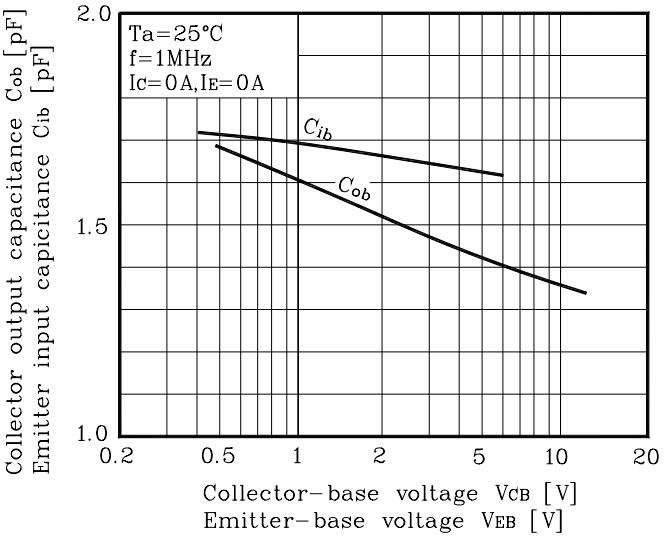
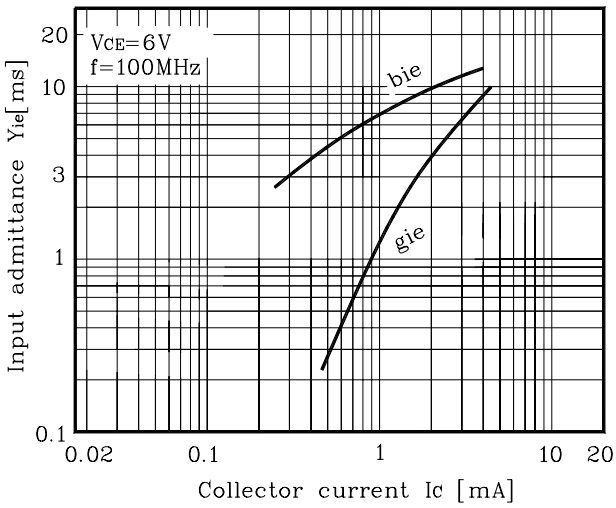


Fig. 6 Yie-I_C



Electrical Characteristic Curves

Fig. 7 I_C-Yoe

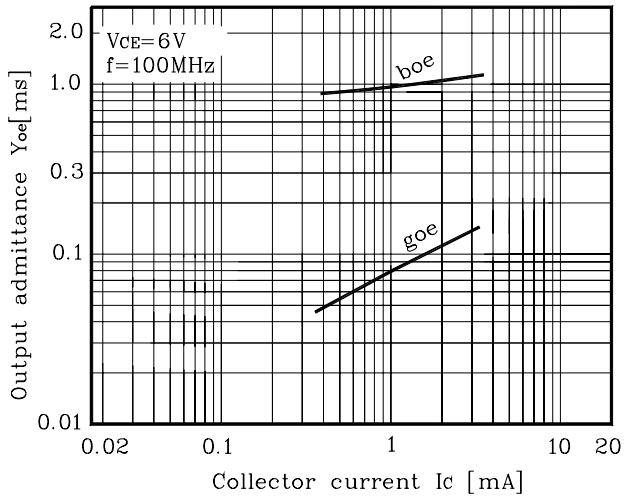


Fig. 8 I_C-Yfe

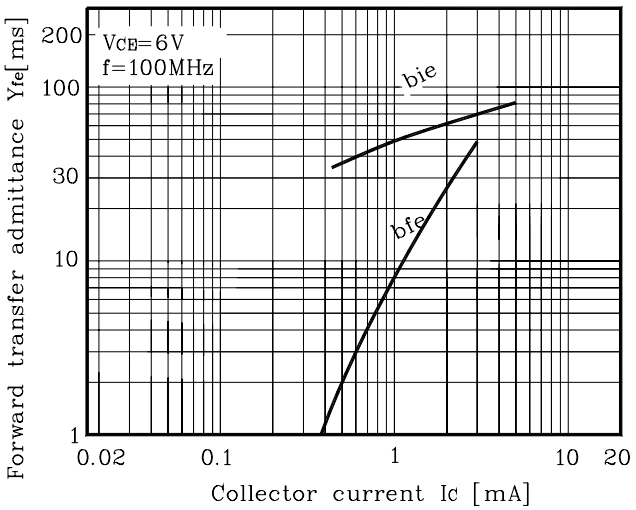
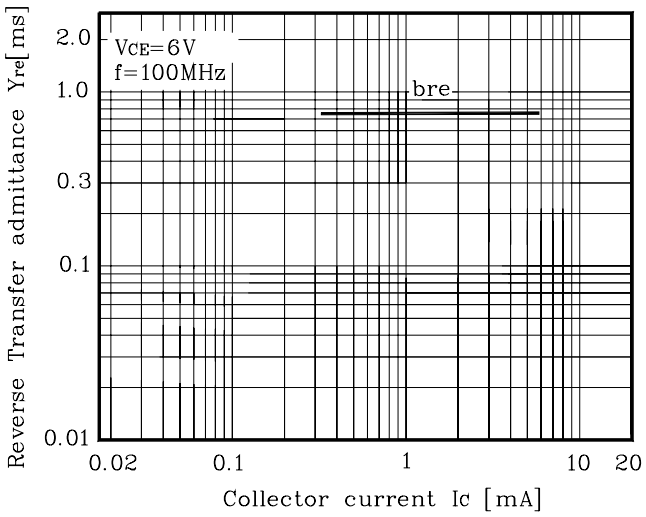
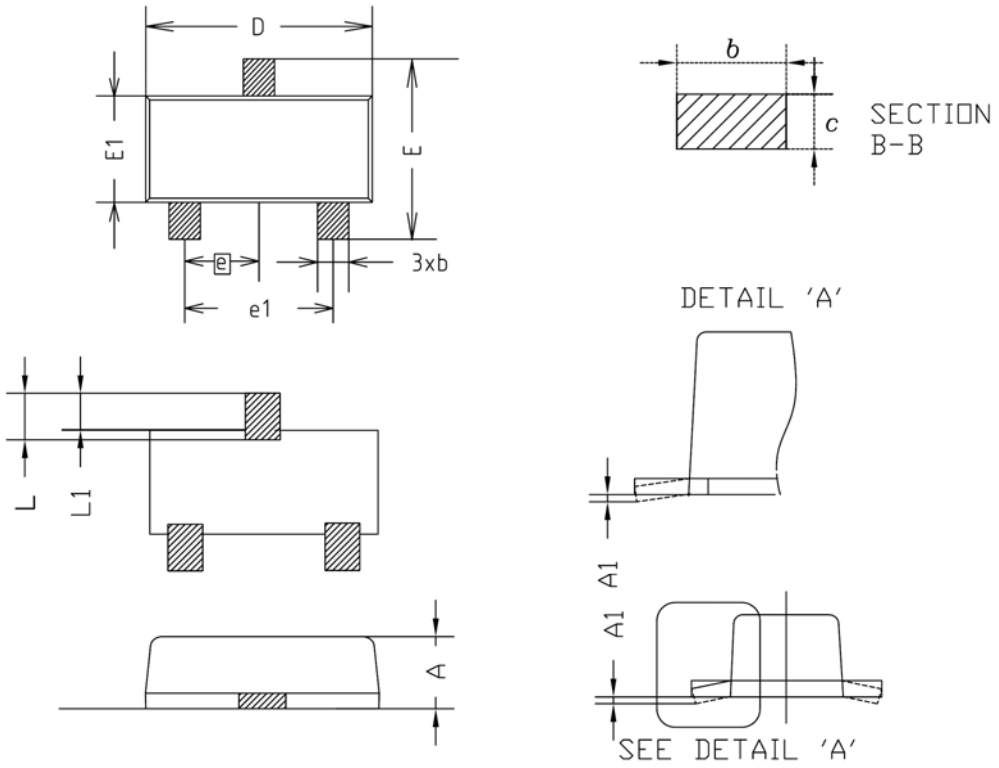


Fig. 9 I_C - Yre

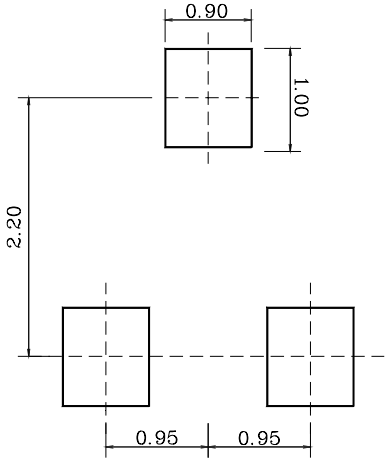


Outline Dimension



SYMBOL	MILLIMETER(mm)			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	0.80	0.90	1.00	
A1	0.00	–	0.10	
b	0.35	0.40	0.45	
c	0.10	0.15	0.20	
D	2.80	2.90	3.00	
E	2.30	2.40	2.50	
E1	1.50	1.60	1.70	
e	0.95BSC			
e1	1.80	1.90	2.00	
L	0.48	0.58	0.68	
L1	0.30	–	0.50	

※Recommend PCB solder land [Unit: mm]



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