Silicon NPN transistor epitaxial type
C5993

[Applications]

UHF converter
Local oscillator

[Feature]

High transition frequency fT= 3.2GHz (typ.)
Low output capacitance Cob= 0.8pF(typ.)

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	20	V
Collector-emitter voltage	VCEO	11	V
Emitter-base voltage	VEBO	3	V
Collector current	IC	50	mA
Junction temperature	Tj	150	C
Storage temperature	Tstg	-55 to 150	C

[Electrical characteristics (Ta=25C)]

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	20	-	-	V	IC= 10uA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	11	-	-	V	IC= 1mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	3	-	-	V	IE= 10uA, IC= 0A
Collector cut-off current	ICBO	-	-	0.5	uA	VCB= 10V, IE= 0A
Emitter cut-off current	IEBO	-	-	0.5	uA	VEB= 2V, IC= 0A
DC current gain	hFE	56	-	180	-	VCE= 10V, IC= 5mA
Collector-emitter saturation voltage	VCE(sat)	-	-	0.5	V	IC= 10mA, IB= 5mA
Transition frequency	f T	1400	3200	-	MHz	VCE= 10V, IE= -10mA
Collector output capacitance	Cob	-	0.8	1.5	pF	VCB= 10V, f = 1MHz, IE= 0A
Feedback capacitance	Cre	-	0.55	1.3	pF	VCB= 10V, f = 1MHz, IE= 0A

Notice 1) These are measured data of transistors assembled by PHENITEC SEMICONDUCTOR Corp. and are for reference only.
Notice 2) The contents described herein are subject to change without notice.

Fig.1 hFE - IC
at VCE= 10V, Ta= 25C

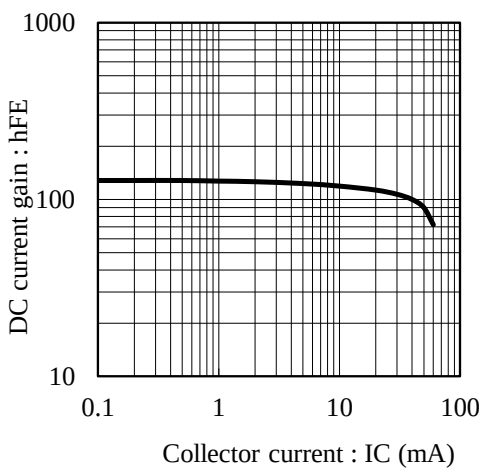

Fig.2 VCE(sat) - IC
at IC/IB= 2, Ta= 25C

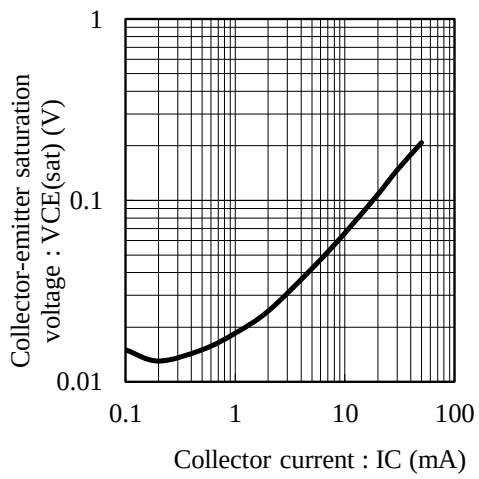

Fig.3 fT - IE
at VCE= 10V, Ta= 25C

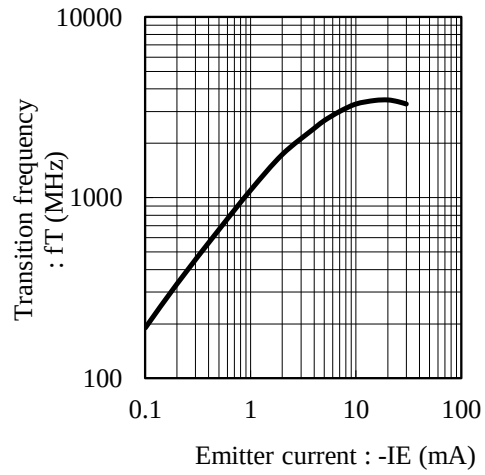

Fig.4 Cob - VCB
at f= 1MHz, Ta= 25C

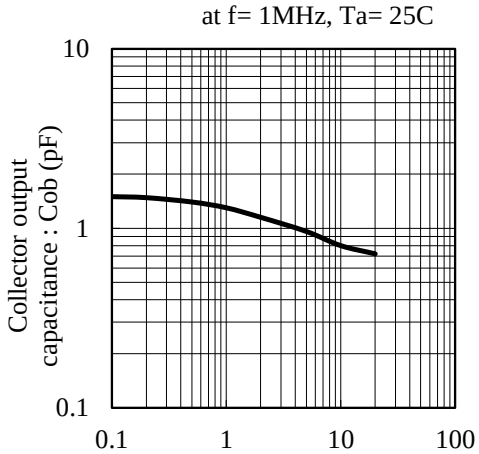

Fig.5 Cre - VCB
at f=1MHz, Ta= 25C