Silicon NPN transistor epitaxial type
C5917

[Applications]

High voltage, High current

[Feature]

High voltage VCEO= 200V
High current gain charactristic
Low collector-emitter saturation voltage VCE(sat)= 0.18V(Max.) at IC/IB= 1A/50mA

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	300	V
Collector-emitter voltage	VCEO	200	V
Emitter-base voltage	VEBO	7	V
Collector current	IC	2	A
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	300	-	-	V	IC= 50uA
Collector-emitter breakdown voltage	BVCEO	200	-	-	V	IC= 1mA
Emitter-base breakdown voltage	BVEBO	7	-	-	V	IE= 50uA
Collector cut-off current	ICBO	-	-	50	nA	VCB= 300V
Emitter cut-off current	IEBO	-	-	50	nA	VEB= 6V
Collector cut-off current	ICES	-	-	50	nA	VCES= 300V
DC current gain 1	hFE 1	190	-	450	-	VCE= 5V, IC= 100mA
DC current gain 2	hFE 2	180	-	-	-	VCE= 5V, IC= 500mA
DC current gain 3	hFE 3	50	-	-	-	VCE= 1V, IC= 700mA
DC current gain 4	hFE 4	55	-	-	-	VCE= 5V, IC= 1A
Collector-emitter saturation voltage 1	VCE(sat) 1	-	-	0.11	V	IC= 500mA, IB= 50mA
Collector-emitter saturation voltage 2	VCE(sat) 2	-	-	0.4	V	IC= 700mA, IB= 14mA
Collector-emitter saturation voltage 3	VCE(sat) 3	-	-	0.18	V	IC= 1A, IB= 50mA
Base-emitter saturation voltage	VBE(sat)	-	-	0.85	V	IC= 500mA, IB= 50mA
Base-emitter on voltage	VBE(on)	0.5	-	0.73	V	VCE= 5V, IC= 5mA
Transition frequency	fT	-	90	-	MHz	VCE= 10V, IE= -100mA
Collector output capacitance	Cob	-	16	-	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 VBE(on) - IC
at VCE= 5V, Ta= 25C

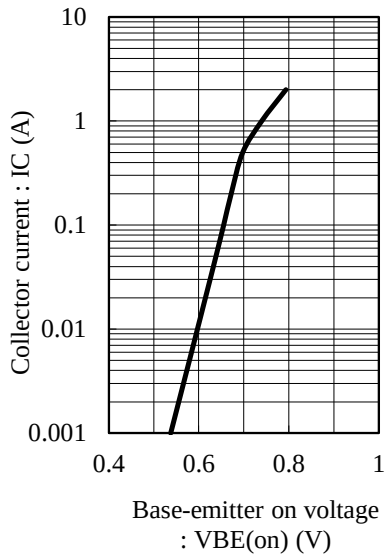

Fig.2 hFE - IC
at VCE= 1V, Ta= 25C

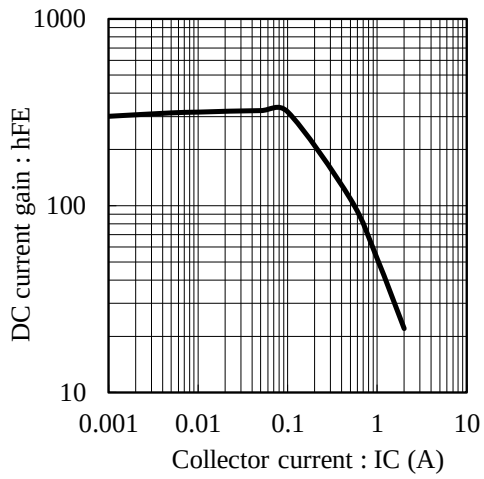

Fig.3 hFE - IC
at VCE= 5V, Ta= 25C

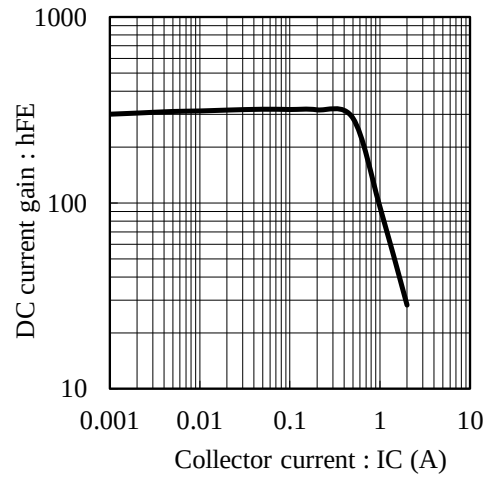

Fig.4 VCE(sat) - IC
at IC/IB= 50, Ta= 25C

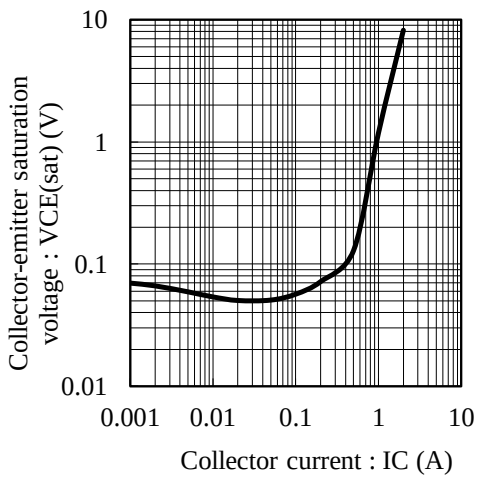

Fig.5 VCE(sat) - IC
at IC/IB= 20, Ta= 25C

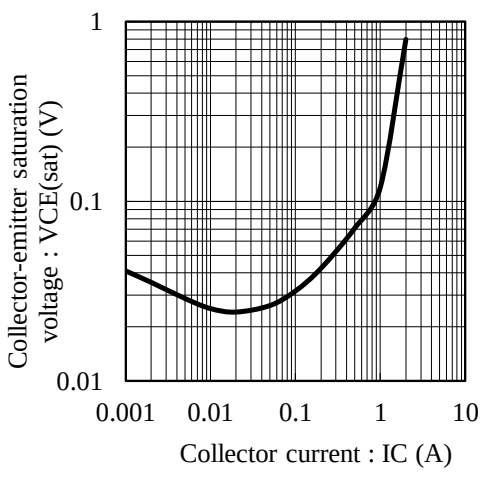

Fig.6 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

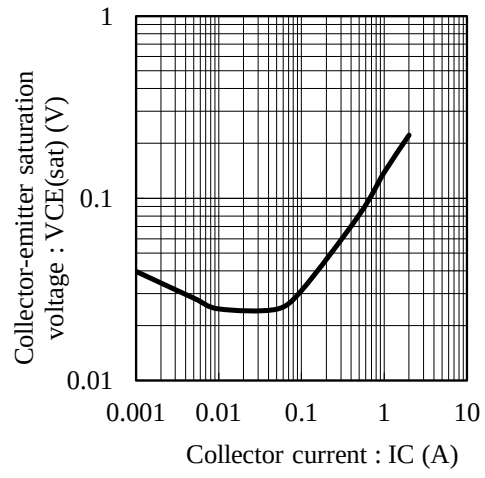

Fig.7 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

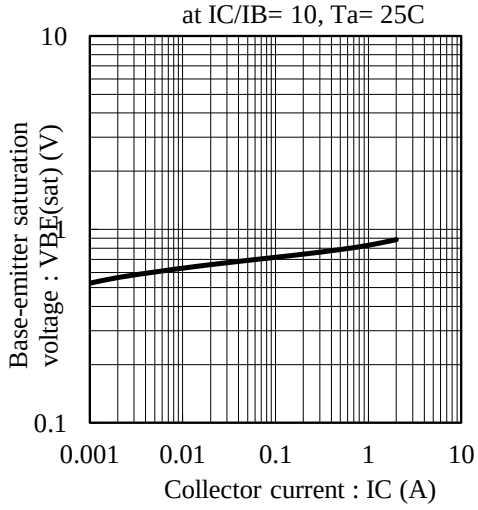

Fig.8 fT - IE
at VCE= 10V, Ta= 25C

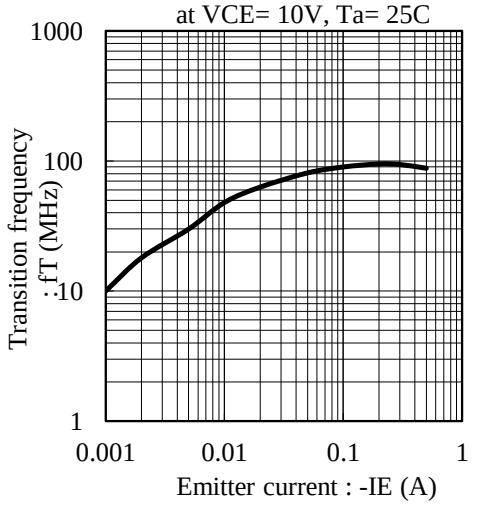

Fig.9 Cob - VCB
at f= 1MHz, Ta= 25C

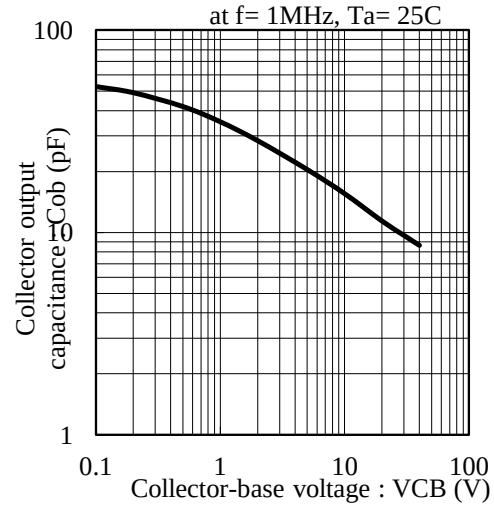

Fig.10 Cib - VEB
at f= 1MHz, Ta= 25C