Silicon NPN transistor epitaxial type
DP005

[Applications]

General purpose

[Feature]

Low collector saturation voltage VCE(sat)= 0.33V(Max.) at IC= 100mA, IB= 10mA

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	80	V
Collector-emitter voltage	VCEO	80	V
Emitter-base voltage	VEBO	4	V
Collector current	IC	500	mA
Junction temperature	Tj	125	C
Storage temperature	Tstg	-55 to 125	C

[Electrical characteristics (Ta=25C)]

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	80	-	-	V	IC= 100uA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	80	-	-	V	IC= 1mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	4	-	-	V	IE= 100uA, IC= 0A
Collector cutoff current	ICBO	-	-	100	nA	VCB= 80V
Collector cutoff current	ICEO	-	-	100	nA	VCE= 60V
Emitter cutoff current	IEBO	-	-	100	nA	VEB= 5V
DC current gain 1	hFE 1	90	-	-	-	VCE= 1V, IC= 10mA
DC current gain 2	hFE 2	90	-	-	-	VCE= 1V, IC= 100mA
Collector-emitter saturation voltage	VCE(sat)	-	-	0.33	V	IC= 100mA, IB= 10mA
Transition frequency	fT	-	115	-	MHz	VCE= 2V, IE= -10mA
Collector output capacitance	Cob	-	4.5	-	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 IC - VBE(on)
at VCE= 1V, Ta= 25C

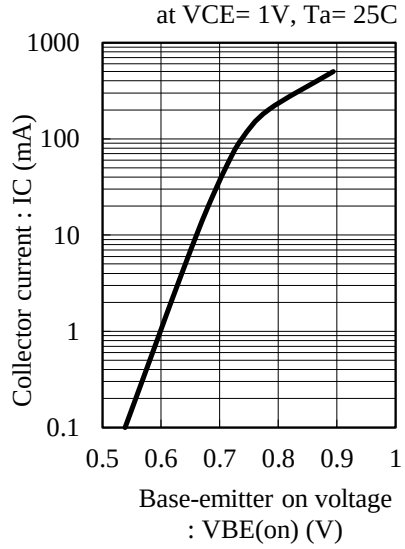

Fig.2 hFE - IC
at VCE= 1V, Ta= 25C

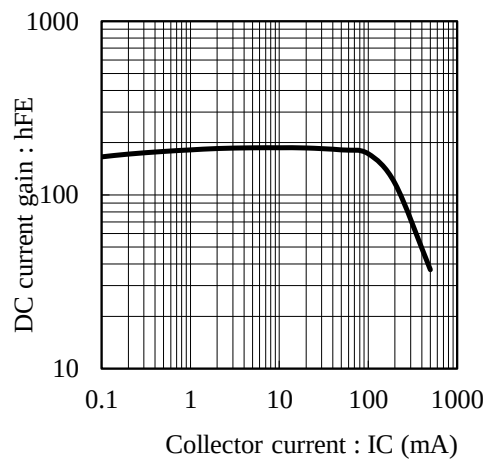

Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

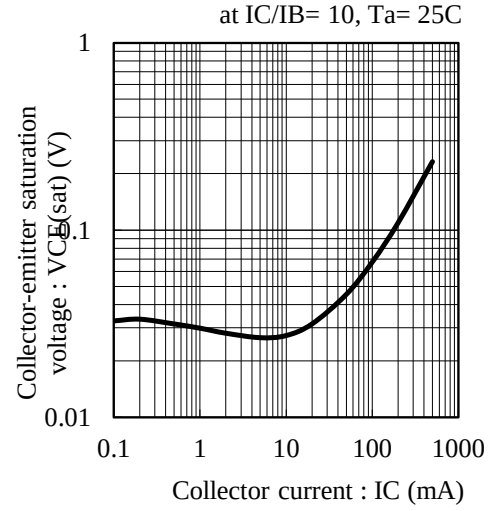

Fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

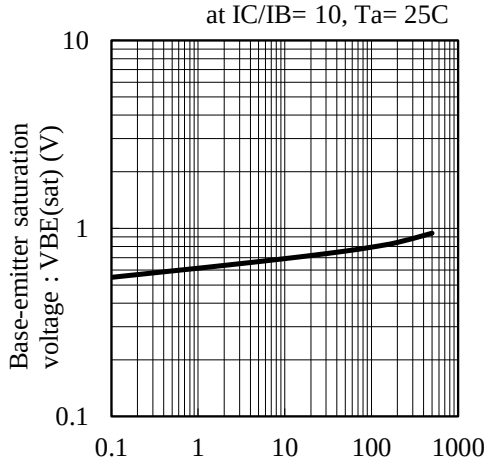

Fig.5 fT - IE
at VCE= 2V, Ta= 25C

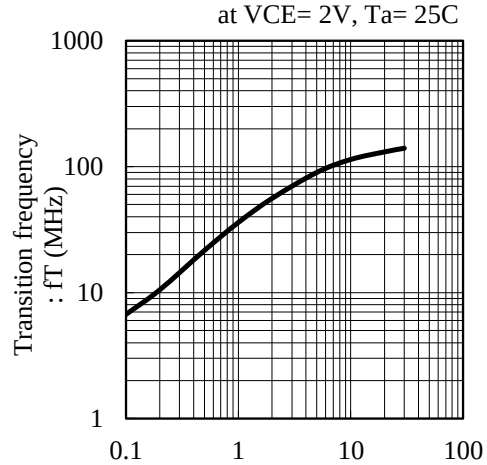

Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

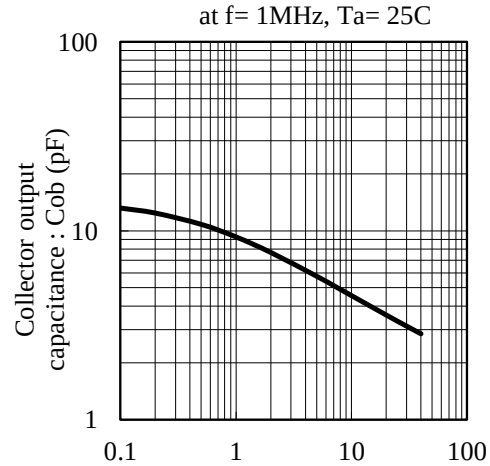

Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C