Silicon NPN transistor epitaxial type
D5849

[Applications]
General purpose amplifier and switching

[Feature]
Correspond to BC817
High collector current
Low collector-emitter saturation voltage VCE(sat)= 0.15V(Typ.) at IC= 500mA, IB= 50mA
Small collector output capacitance Cob= 4pF(Typ.) at VCB= 10V
Complimentary type of phenitec P/N B5849

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	50	V
Collector-emitter voltage	VCEO	45	V
Emitter-base voltage	VEBO	5	V
Collector current	IC	500	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	50	-	-	V	IC= 10uA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	45	-	-	V	IC= 10mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	5	-	-	V	IE= 1uA, IC= 0A
Collector cut-off current	ICBO	-	-	100	nA	VCB= 20V, IE= 0A
Emitter cut-off current	IEBO	-	-	100	nA	VEB= 5V, IE= 0A
DC current gain 1	hFE 1	100	-	600	-	VCE= 1V, IC= 100mA
DC current gain 2	hFE 2	40	-	-	-	VCE= 1V, IC= 500mA
Collector-emitter saturation voltage	VCE(sat)	-	-	0.7	V	IC= 500mA, IB= 50mA
Base-emitter on voltage	VBE(on)	-	-	1.2	V	VCE= 1V, IC= 500mA
Transition frequency	fT	100	-	-	MHz	VCE= 5V, IE= -10mA
Collector output capacitance	Cob	-	4	-	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= 1V, Ta= 25C

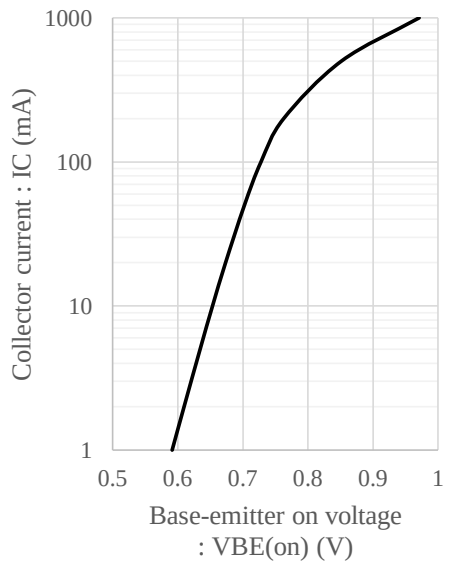

Fig.2 hFE - IC
at VCE= 1V, Ta= 25V

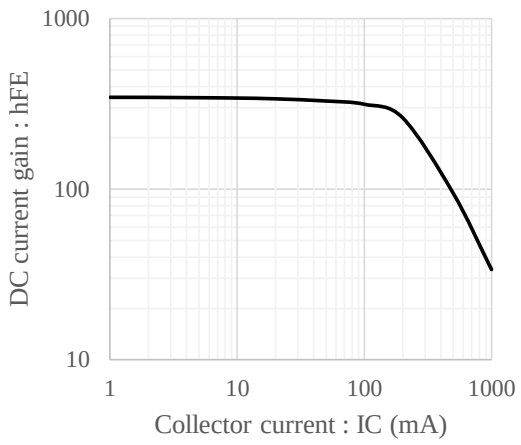

Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

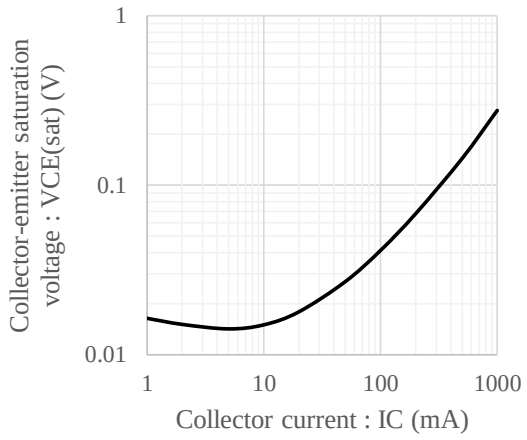

Fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

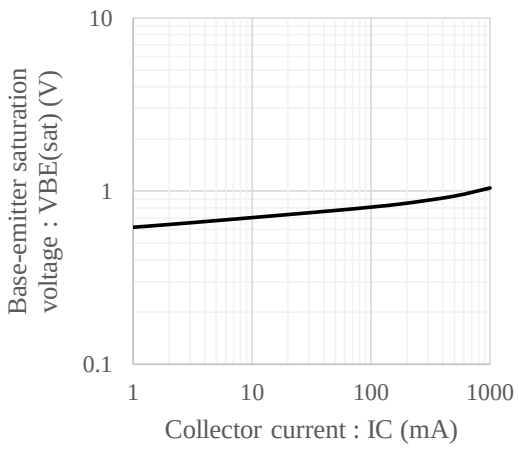

Fig.5 fT - IE
at VCE= 5V, Ta= 25C

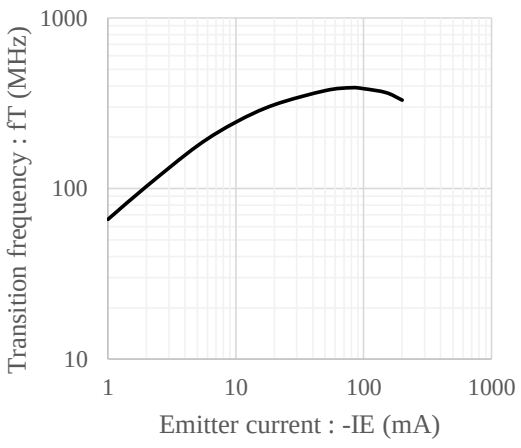

Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

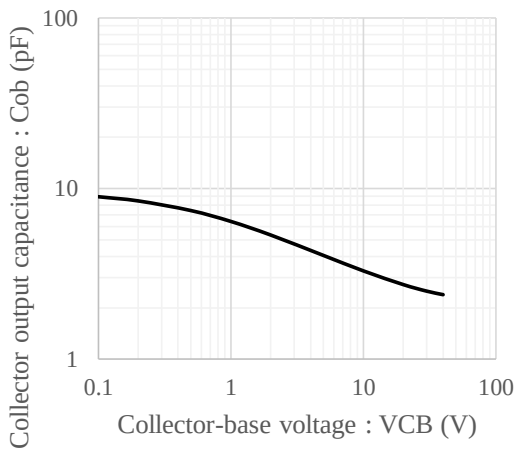

Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C