Silicon NPN transistor epitaxial type
D5929

[Applications]

Inverter, Strobo flash, DC-DC converter
with small collector-emitter saturation voltage.
Power switching with high collector current.

[Feature]

High collector-emitter breakdown voltage BVCEO= 30V
High emitter-base breakdown voltage BVEBO= 9V
Small collector-emitter saturation voltage VCE(sat)= 0.35V(Typ.) at IC= 1.5A, IB= 50mA

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	50	V
Collector-emitter voltage	VCEO	30	V
Emitter-base voltage	VEBO	9	V
Collector current	IC	3	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	50	-	-	V	IC= 10uA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	30	-	-	V	IC= 1mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	9	-	-	V	IE= 10uA, IC= 0A
Collector cut-off current	ICBO	-	-	100	nA	VCB= 10V, IE= 0A
Collector cut-off current	ICEO	-	-	1	uA	VCE= 10V, IB= 0A
Emitter cut-off current	IEBO	-	-	100	nA	VEB= 7V, IE= 0A
DC current gain 1	hFE 1	360	-	760	-	VCE= 2V, IC= 0.5A
DC current gain 2	hFE 2	150	-	-	-	VCE= 2V, IC= 2A
Collector-emitter saturation voltage	VCE(sat)	-	0.35	1.1	V	IC= 1.5A, IB= 50mA
Transition frequency	f T	-	150	-	MHz	VCE= 6V, IE= -50mA
Collector output capacitance	Cob	-	-	50	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= 2V, Ta= 25C

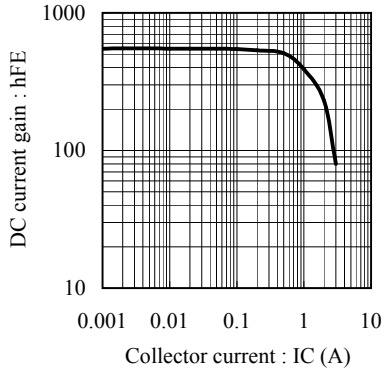

Fig.2 VCE(sat) - IC
at IC/IB= 30, Ta= 25C

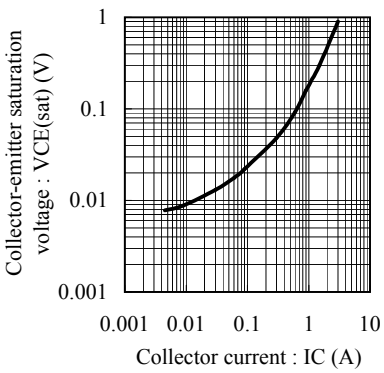

Fig. VBE(sat) - IC
at IC/IB= 30, Ta= 25C

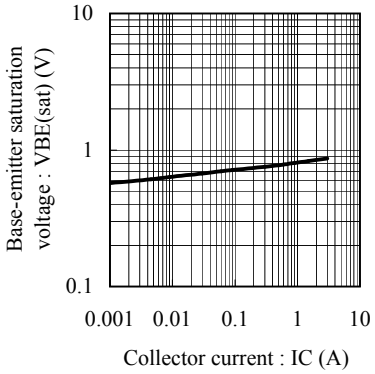

Fig.4 fT - IE
at VCE= 6V, Ta= 25C

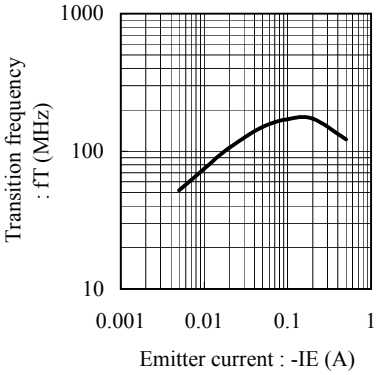

Fig.5 Cob - VCB
at f= 1MHz, Ta= 25C

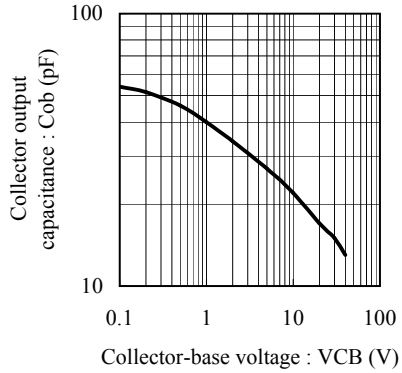

Fig.6 Cib - VEB
at f= 1MHz, Ta= 25C