Silicon NPN transistor epitaxial type
C5919

[Applications]

DC/DC relay drivers, lamp drivers, motor drivers, strobes

[Feature]

Very low collector-emitter saturation voltage VCE(sat)= 0.3V (Max.) at IC= 3A, IB= 60mA

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	15	V
Collector-emitter voltage	VCEO	15	V
Emitter-base voltage	VEBO	5	V
Collector current (DC)	IC	6	A
Collector current (Pulse)	ICP	9	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	15	-	-	V	IC= 10uA
Collector-emitter breakdown voltage	BVCEO	15	-	-	V	IC= 1mA
Emitter-base breakdown voltage	BVEBO	5	-	-	V	IE= 10uA
Collector cut-off current	ICBO	-	-	100	nA	VCB= 12V
Emitter cut-off current	IEBO	-	-	100	nA	VEB= 4V
DC current gain	hFE	250	-	-	-	VCE= 2V, IC= 0.5A
Collector-emitter saturation voltage 1	VCE(sat) 1	-	-	0.18	V	IC= 1.5A, IB= 30mA
Collector-emitter saturation voltage 2	VCE(sat) 2	-	-	0.3	V	IC= 3A, IB= 60mA
Base-emitter saturation voltage	VBE(sat)	-	-	1.2	V	IC= 1.5A, IB= 30mA
Transition frequency	fT	-	250	-	MHz	VCE= 2V, IE= -0.5A
Collector output capacitance	Cob	-	33	-	pF	VCB= 10V, f = 1MHz, IE= 0A
Turn on time	ton	-	35	-	ns	VCC= 5V, IC= 1.5A
Storage time	tstg	-	135	-	ns	IB1= -IB2= 75mA
Fall time	sf	-	5	-	ns	

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= 2V, Ta= 25C

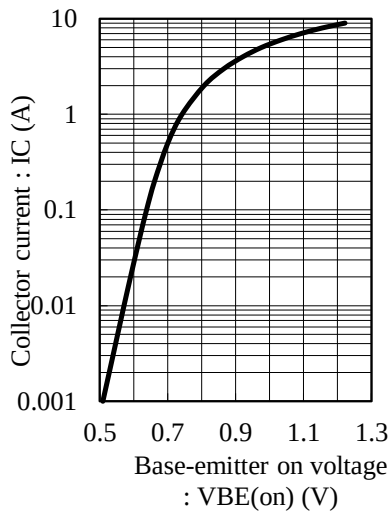

Fig.2 hFE - IC
at VCE= 2V, Ta= 25C

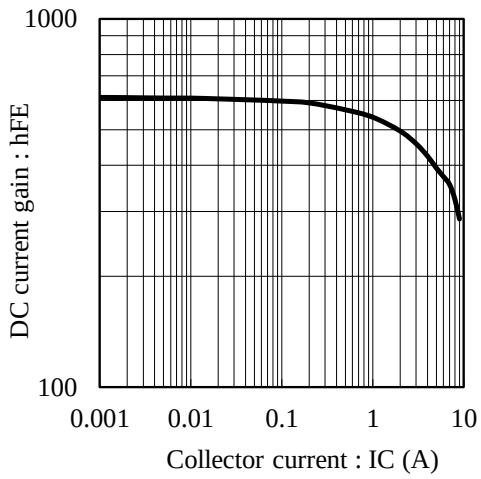

Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

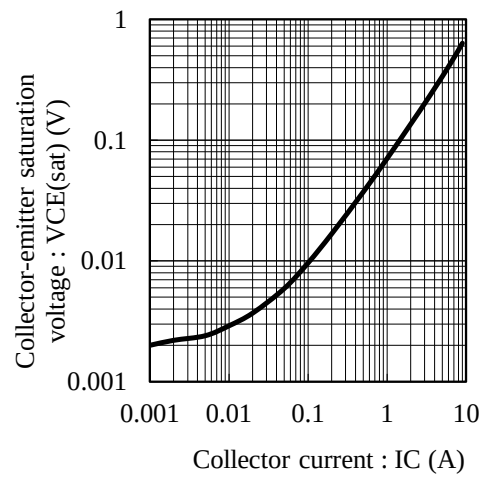

Fig.4 VCE(sat) - IC
at IC/IB= 50, Ta= 25C

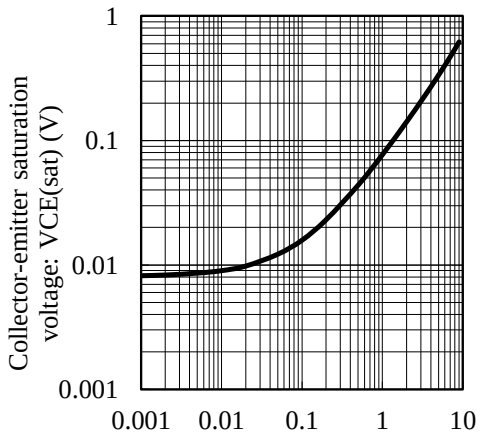

Fig.5 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

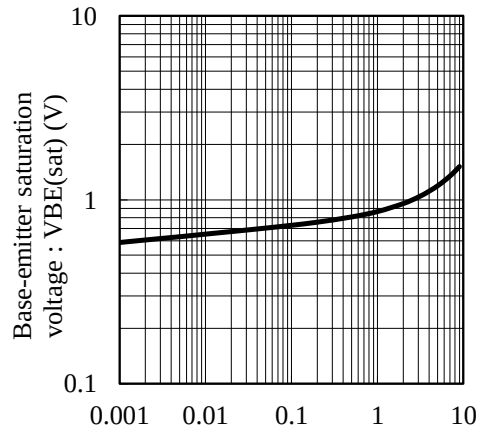

Fig.6 VBE(sat) - IC
at IC/IB= 50, Ta= 25C

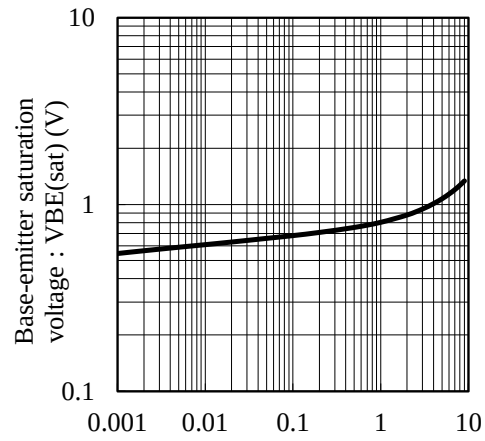

Fig.7 fT - IE
at VCE= 2V, Ta= 25C

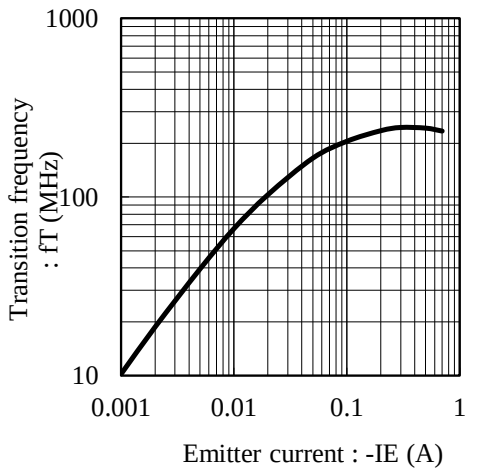

Fig.8 Cob - VCB
at f= 1MHz, Ta= 25C

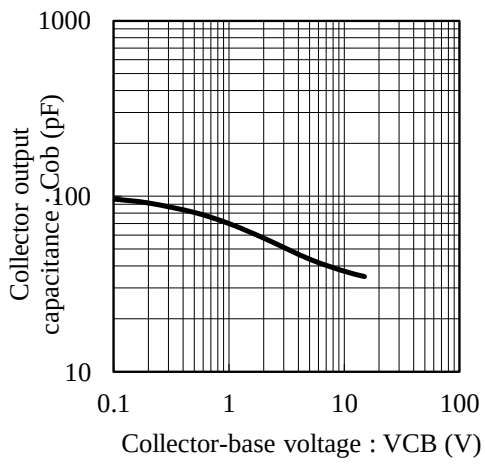

Fig.9 Cib - VEB
at f= 1MHz, Ta= 25C