Silicon NPN transistor epitaxial type
C5949

[Applications]
Inverter circuit of LCD monitor

[Feature]
Very low collector-emitter saturation voltage VCE(sat)= 350mV (Max.) at IC= 2A, IB= 50mA

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	170	V
Collector-emitter voltage	VCEO	60	V
Emitter-base voltage	VEBO	6	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	170	200	-	V	IC= 100uA
Collector-emitter breakdown voltage	BVCEO	60	90	-	V	IC= 1mA
Emitter-base breakdown voltage	BVEBO	6	-	-	V	IE= 10uA
Collector cut-off current	ICBO	-	-	0.5	uA	VCB= 170V
Collector cut-off current	ICEO	-	-	1	uA	VCE= 60V
Emitter cut-off current	IEBO	-	-	0.5	uA	VEB= 6V
DC current gain	hFE	160	-	440	-	VCE= 2V, IC= 100mA
Collector-emitter saturation voltage 1	VCE(sat) 1	-	160	200	mV	IC= 1A, IB= 25mA
Collector-emitter saturation voltage 2	VCE(sat) 2	-	270	350	mV	IC= 2A, IB= 50mA
Base-emitter saturation voltage	VBE(sat)	-	-	1.2	V	IC= 1A, IB= 100mA
Transition frequency	fT	-	200	-	MHz	VCE= 10V, IE= -50mA
Collector output capacitance	Cob	-	20	-	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=2V, Ta= 25C

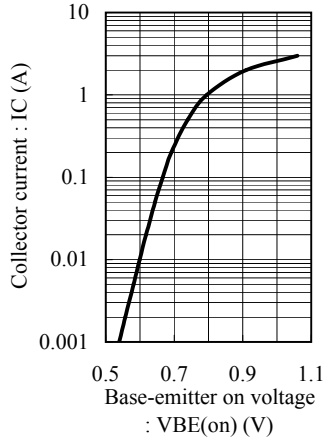

Fig.2 hFE - IC
at VCE= 2V, Ta= 25C

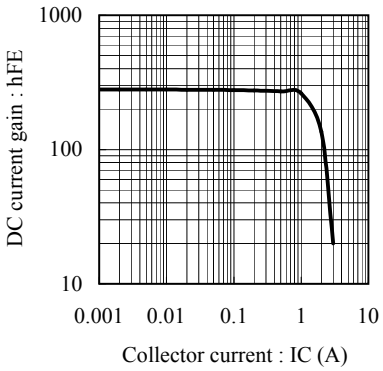

Fig.3 VCE(sat) - IC
at IC/IB= 40, Ta= 25C

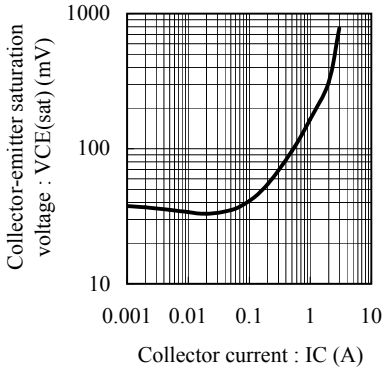

Fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

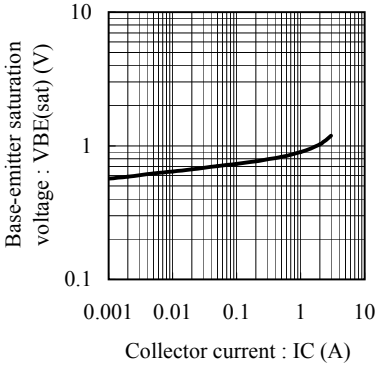

Fig.5 fT - IE
at VCE= 10V, Ta= 25C

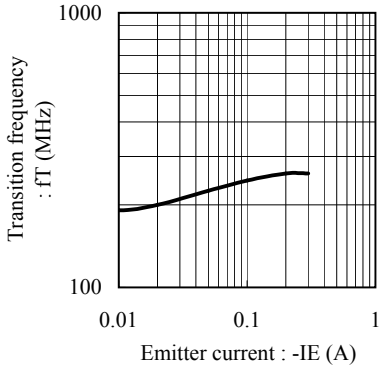

Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

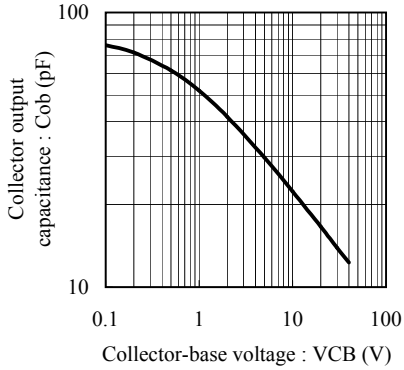

Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C