Silicon NPN transistor epitaxial type
6C942

[Applications]
Inverter circuit of LCD monitor

[Feature]
Very low collector-emitter saturation voltage VCE(sat)= 300mV (Max.) at IC= 2A, IB= 50mA

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	80	V
Collector-emitter voltage	VCEO	50	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	80	-	-	V	IC= 100uA
Collector-emitter breakdown voltage	BVCEO	50	-	-	V	IC= 1mA
Emitter-base breakdown voltage	BVEBO	6	-	-	V	IE= 10uA
Collector cut-off current	ICBO	-	-	0.5	uA	VCB= 80V
Collector cut-off current	ICEO	-	-	1	uA	VCE= 50V
Emitter cut-off current	IEBO	-	-	0.5	uA	VEB= 6V
DC current gain	hFE	180	-	610	-	VCE= 2V, IC= 100mA
Collector-emitter saturation voltage 1	VCE(sat) 1	-	-	180	mV	IC= 1A, IB= 25mA
Collector-emitter saturation voltage 2	VCE(sat) 2	-	-	300	mV	IC= 2A, IB= 50mA
Base-emitter saturation voltage	VBE(sat)	-	-	1.2	V	IC= 1A, IB= 100mA
Transition frequency	fT	-	230	-	MHz	VCE= 10V, IE= -50mA
Collector output capacitance	Cob	-	25	-	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

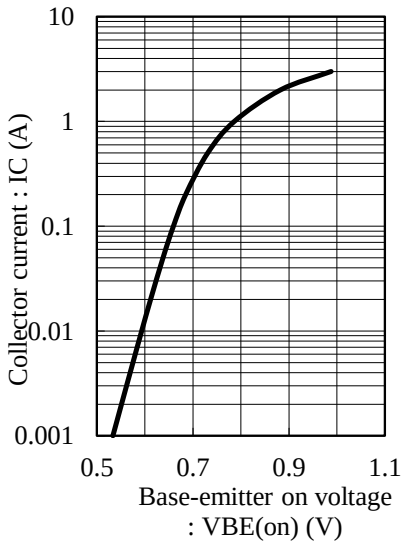

Fig.2 hFE - IC
at VCE= 2V, Ta= 25C

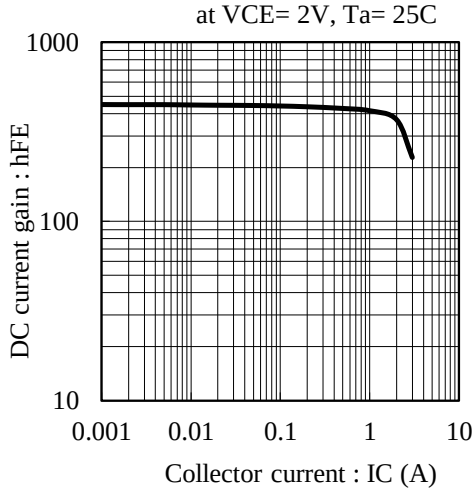

Fig.3 VCE(sat) - IC
at IC/IB= 40, Ta= 25C

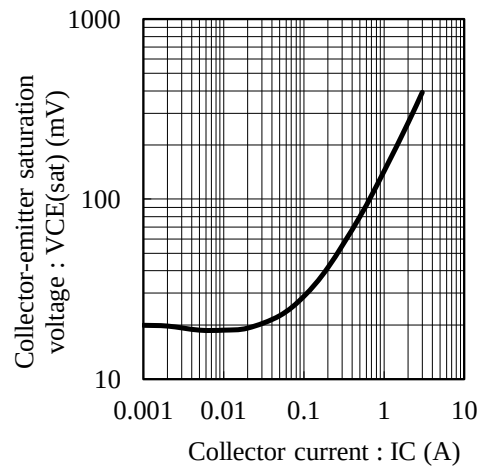

Fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

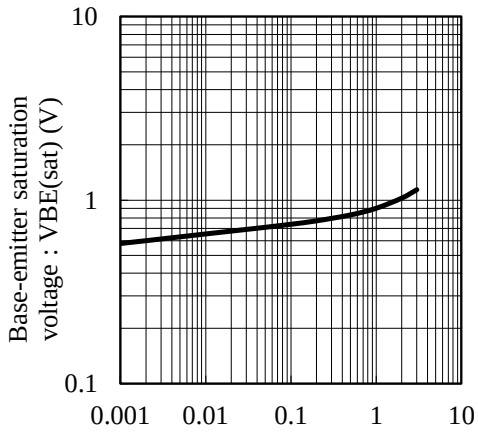

Fig.5 fT - IE
at VCE= 10V, Ta= 25C

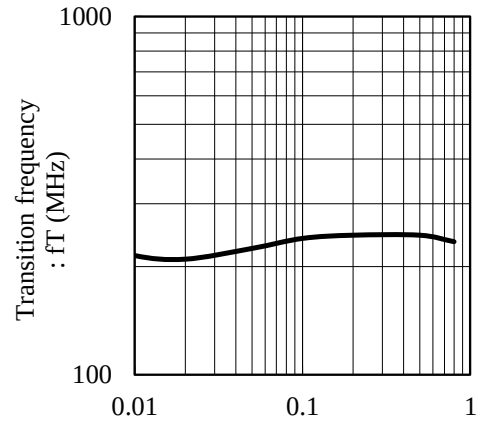

Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

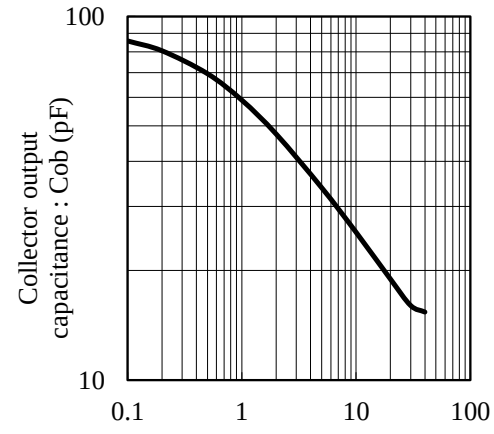

Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C