Silicon NPN transistor epitaxial type
6C938X

[Applications]
Ballast

[Feature]
High Voltage VCEO= 400V, VCBO= 600V
Fast-switching speed

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	600	V
Collector-emitter voltage	VCEO	400	V
Emitter-base voltage	VEBO	9	V
Collector current	IC	1	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	600	-	-	V	IC= 100uA
Collector-emitter breakdown voltage	BVCEO	400	-	-	V	IC= 1mA
Emitter-base breakdown voltage	BVEBO	9	-	-	V	IE= 100uA
Collector cut-off current	ICEO	-	-	1	mA	VCE= 400V
DC current gain	hFE	80	-	-	-	VCE= 10V, IC= 250mA
Collector-emitter saturation voltage 1	VCE(sat) 1	-	-	0.5	V	IC= 500mA, IB= 100mA
Collector-emitter saturation voltage 2	VCE(sat) 2	-	-	1	V	IC= 1A, IB= 250mA
Collector-emitter saturation voltage 3	VCE(sat) 3	-	-	1.5	V	IC= 1.5A, IB= 500mA
Base-emitter saturation voltage 1	VBE(sat) 1	-	-	1	V	IC= 500mA, IB= 100mA
Base-emitter saturation voltage 2	VBE(sat) 2	-	-	1.2	V	IC= 1A, IB= 250mA
Turn on time	ton	-	-	1	us	VCC= 125V, IC= 1A
Storage time	tstg	-	-	4	us	IB1= -IB2= 200mA
Fall time	tf	-	-	0.7	us	

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= 10V, Ta= 25C

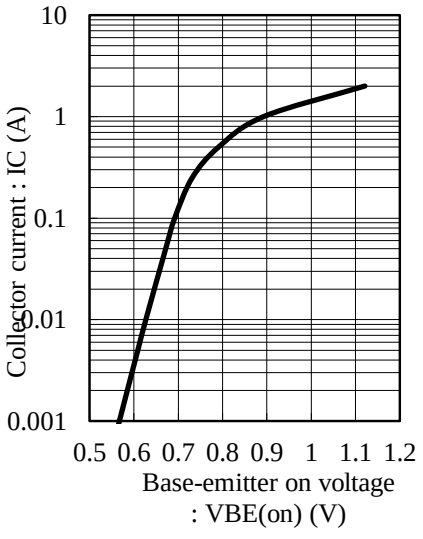

Fig.2 hFE - IC
at VCE= 10V, Ta= 25C

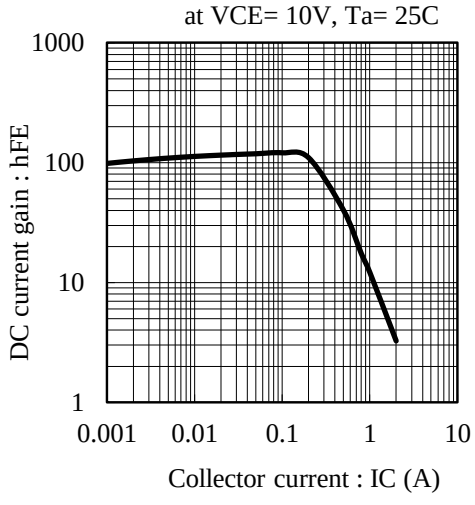

Fig.3 VCE(sat) - IC
at IC/IB= 5, Ta= 25C

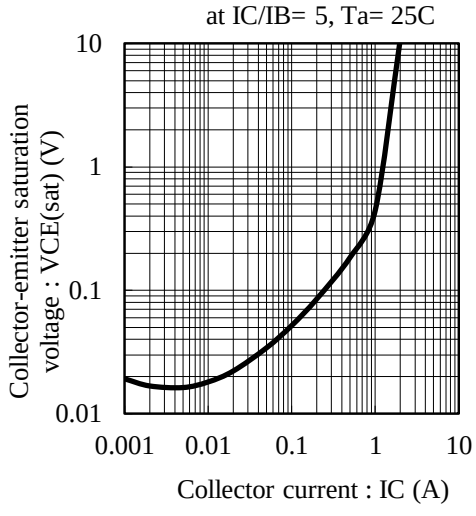

Fig.4 VCE(sat) - IC
at IC/IB= 4, Ta=25 C

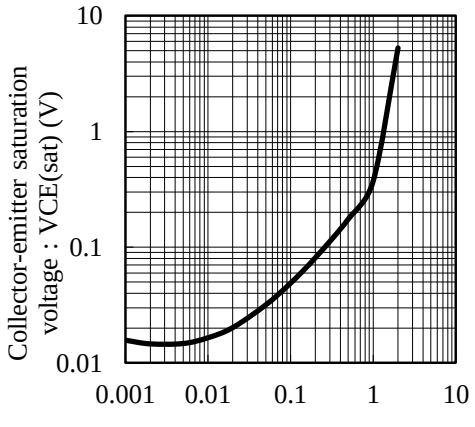

Fig.5 VCE(sat) - IC
at IC/IB= 3, Ta= 25C

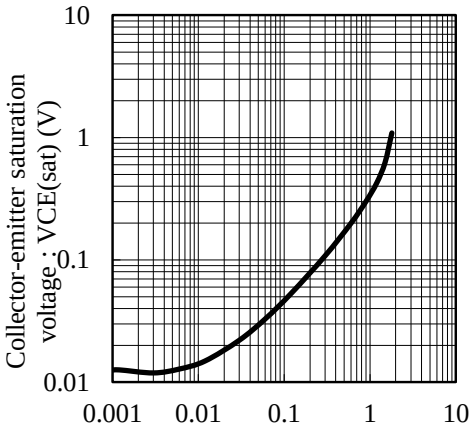

Fig.6 VBE(sat) - IC
at IC/IB= 5, Ta= 25C

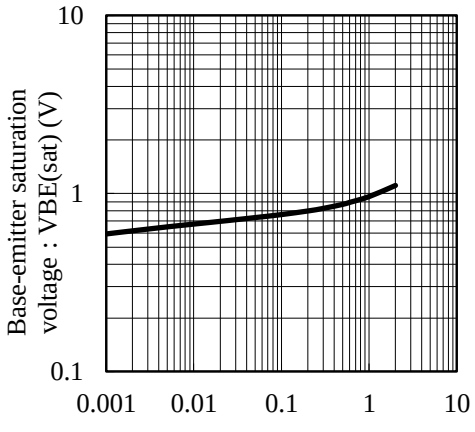

Fig.7 VBE(sat) - IC
at IC/IB= 4, Ta= 25C