Silicon NPN transistor triple diffused type
CP872

[Applications]
High voltage switching and amplifier

[Feature]
High voltage VCEO= 300V
Low collector saturation voltage VCE(sat)= 0.5V (Max.) at IC= 10mA, IB= 1mA
Small collector output capacitance Cob= 1pF (Typ.) at VCB= 20V
PNP complementary pair with AP872

[Absolute maximum ratings (Ta= 25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	350	V
Collector-emitter voltage	VCEO	300	V
Emitter-base voltage	VEBO	7	V
Collector current	IC	50	mA
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	350	-	-	V	IC= 100uA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	300	-	-	V	IC= 1mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	7	-	-	V	IE= 100uA, IC= 0A
Collector cut-off current	ICBO	-	-	0.5	uA	VCB= 350V, IE= 0A
Emitter cut-off current	IEBO	-	-	0.5	uA	VEB= 7V, IC= 0A
Collector cut-off current	ICEO	-	-	2	uA	VCE= 300V, IB= 0A
DC current gain	hFE	64	-	310	-	VCE= 10V, IC= 10mA
Collector-emitter saturation voltage	VCE(sat)	-	-	0.5	V	IC= 10mA, IB= 1mA
Base-emitter saturation voltage	VBE(sat)	-	-	1	V	IC= 10mA, IB= 1mA
Transition frequency	fT	-	56	-	MHz	VCE= 10V, IE= -10mA
Collector output capacitance	Cob	-	1.3	-	p F	VCB= 20V, 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 IC - VBE(on)
at VCE= 10V, Ta= 25C

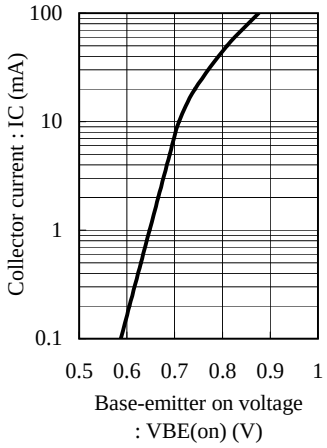

Fig.2 hFE - IC
at VCE= 10V, Ta= 25C

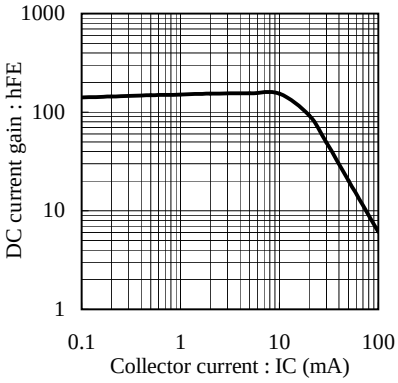

Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

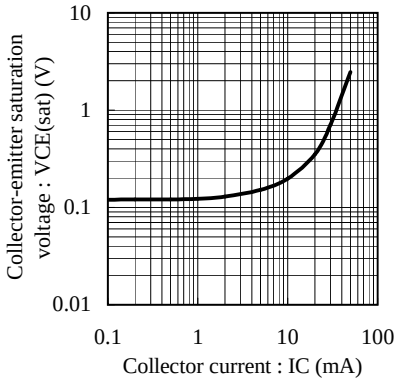

Fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

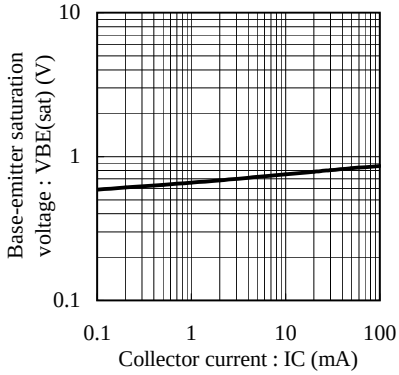

Fig.5 fT - IE
at VCE= 10V, Ta= 25C

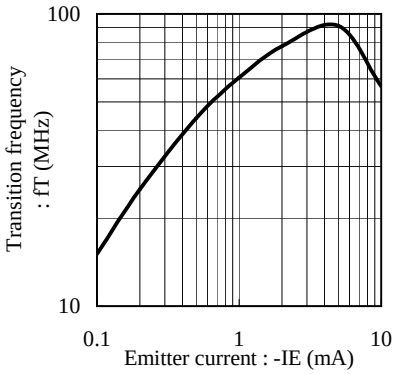

Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

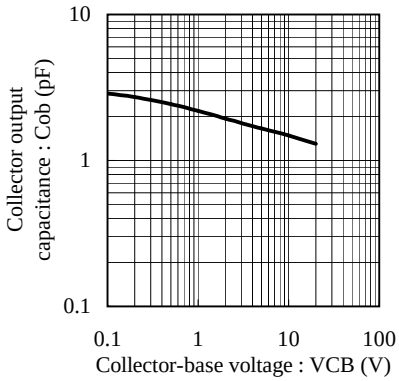

Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C