

Silicon PNP transistor triple diffused type AP870

[Applications]

High voltage switching and amplifier

[Feature]

High voltage $V_{CEO} = -600V$

[Absolute Maximum ratings (Ta= 25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-600	V
Collector-emitter voltage	VCEO	-600	V
Emitter-base voltage	VEBO	-7	V
Collector current (DC)	IC	-0.28	A
Collector current (Pulse)*	ICP	-0.56	A
Junction temperature	Tj	150	C
Storage temperature	Tstg	-55 to 150	C

*Single pulse width=10ms

[Electrical characteristics (Ta= 25C)]

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	-600	-	-	V	IC= -1mA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	-600	-	-	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= -600V, IE= 0A
Collector cut-off current	ICEO	-	-	-3	uA	VCE= -600V, IB= 0A
Emitter cut-off current	IEBO	-	-	-0.5	uA	VEB= -7V, IC= 0A
DC current gain	hFE	54	-	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	f T	-	25	-	MHz	VCE= -10V, IE= 10mA
Collector output capacitance	Cob	-	14	-	p F	VCB= -10V, f = 1MHz, IE= 0A
Turn-on time	ton	-	-	0.5	us	VCC= -250V, IC= -10mA
Storage time	tstg	-	-	5	us	IB1= -IB2= -1mA
Fall time	tf	-	-	0.5	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.

No. AP870-20130218

Fig.1 VBE(on) - IC
at VCE= -10V, Ta= 25C

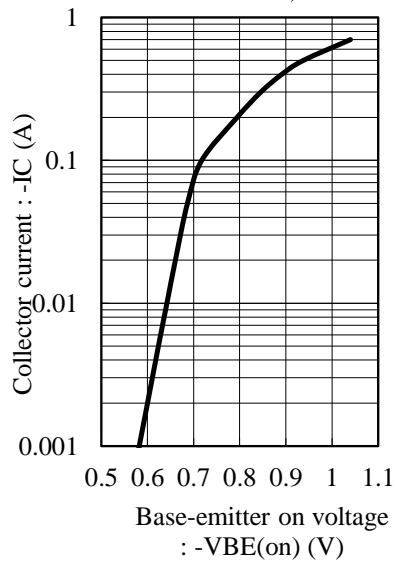


Fig.2 hFE - IC
at VCE= -10V, Ta= 25C

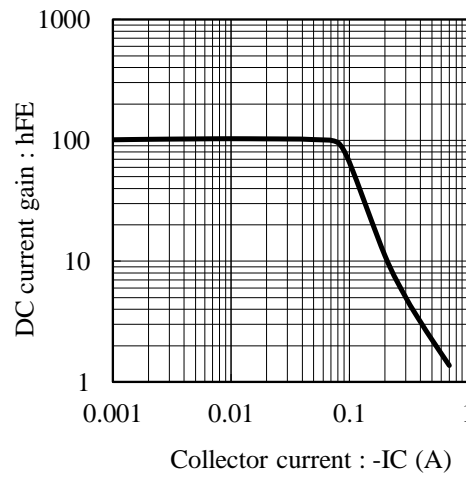


Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

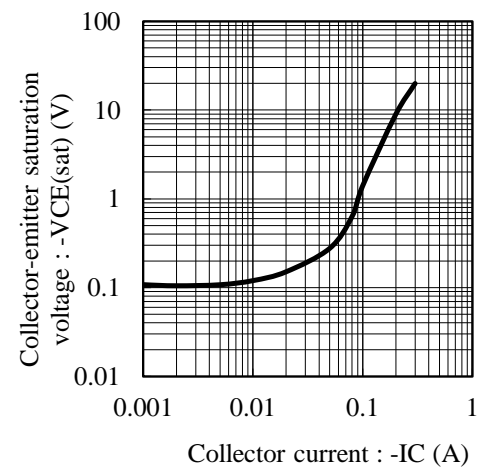


Fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

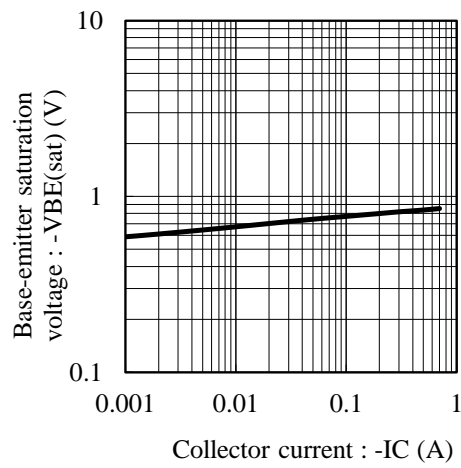


Fig.5 fT - IE
at VCE= -10V, Ta= 25C

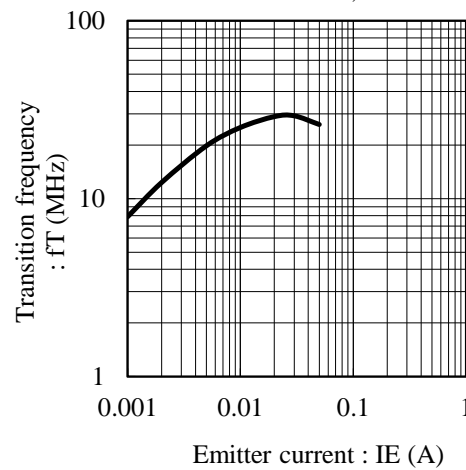


Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

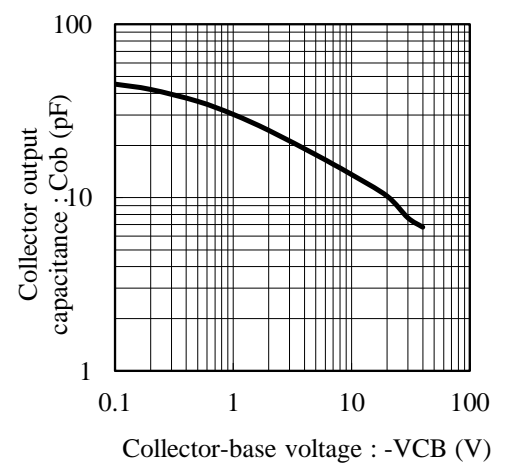


Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C

