

**Silicon NPN transistor triple diffused type  
CP958**

**[ Applications ]**

High voltage switching and amplifier

**[ Feature ]**

High voltage  $V_{CEO} = 400V$

Low collector saturation voltage  $V_{CE(sat)} = 0.75V$  (Max.) at  $I_C = 50mA$ ,  $I_B = 5mA$

Small collector output capacitance  $C_{ob} = 2.5pF$  (Typ.) at  $V_{CB} = 20V$

PNP complementary pair with AP958

**[ Absolute maximum ratings (Ta=25C) ]**

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	400	V
Collector-emitter voltage	VCEO	400	V
Emitter-base voltage	VEBO	6	V
Collector current	IC	300	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	400	-	-	V	IC= 100uA
Collector-emitter breakdown voltage	BVCEO	400	-	-	V	IC= 1mA
Collector-emitter breakdown voltage	BVCES	400	-	-	V	IC= 100uA
Emitter-base breakdown voltage	BVEBO	6	-	-	V	IE= 10uA
Collector cut-off current	ICBO	-	-	0.1	uA	VCB= 400V
Collector cut-off current	ICES	-	-	1	uA	VCE= 400V
Emitter cut-off current	IEBO	-	-	0.1	uA	VEB= 4V
DC current gain 1	hFE 1	40	-	-	-	VCE= 10V, IC= 1mA
DC current gain 2	hFE 2	80	-	300	-	VCE= 10V, IC= 10mA
DC current gain 3	hFE 3	45	-	-	-	VCE= 10V, IC= 50mA
DC current gain 4	hFE 4	40	-	-	-	VCE= 10V, IC= 100mA
Collector-emitter saturation voltage 1	VCE(sat) 1	-	-	0.5	V	IC= 10mA, IB= 1mA
Collector-emitter saturation voltage 2	VCE(sat) 2	-	-	0.75	V	IC= 50mA, IB= 5mA
Base-emitter saturation voltage	VBE(sat)	-	-	0.75	V	IC= 10mA, IB= 1mA
Transition frequency	fT	50	-	-	MHz	VCE= 10V, IE= -10mA
Collector output capacitance	Cob	-	2.5	-	pF	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 hFE - IC  
at VCE= 10V, Ta= 25C

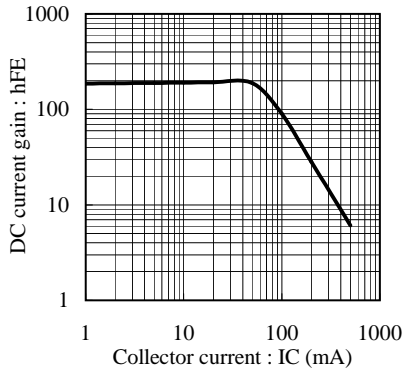


Fig.2 VCE(sat) - IC  
at IC/IB= 10, Ta= 25C

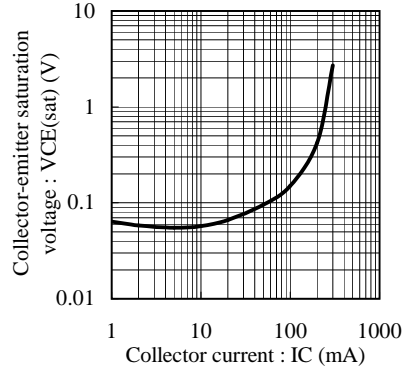


Fig.3 VBE(sat) - IC  
at IC/IB= 10, Ta= 25C

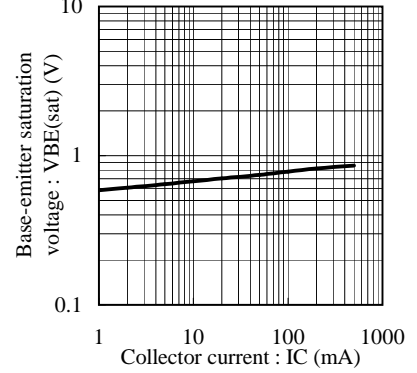


Fig.4 fT - IE  
at VCE= 10V, Ta= 25C

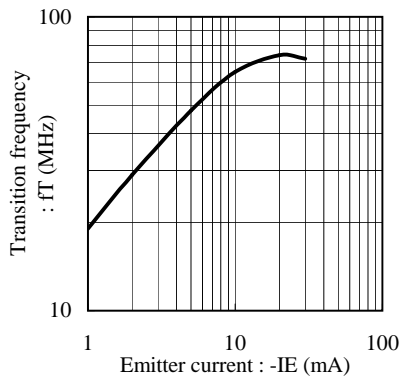


Fig.5 Cob - VCB  
at f= 1MHz, Ta= 25C

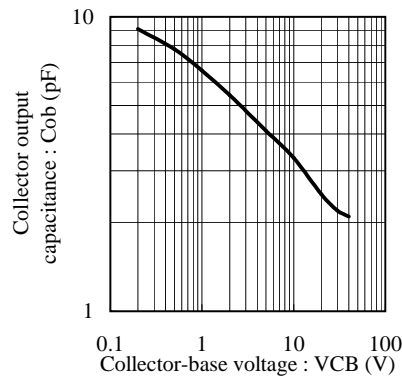


Fig.6 Cib - VEB  
at f= 1MHz, Ta= 25C

