

**Silicon NPN transistor triple diffused type  
CP879**

**[ Applications ]**

High voltage switching

**[ Feature ]**

High voltage V<sub>CEO</sub>= 800V, V<sub>CBO</sub>= 1600V

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

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	1600	V
Collector-emitter voltage	VCEO	800	V
Emitter-base voltage	VEBO	6	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	1600	-	-	V	IC= 1mA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	800	-	-	V	IC= 5mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	6	-	-	V	IE= 1mA, IC= 0A
Collector cut-off current	ICBO	-	-	10	uA	VCB= 1600V, IE= 0A
Collector cut-off current	ICEO	-	-	1	mA	VCE= 800V, IB= 0A
Emitter cut-off current	IEBO	-	-	10	uA	VEB= 6V, IC= 0A
DC current gain 1	hFE 1	20	-	40	-	VCE= 5V, IC= 0.01A
DC current gain 2	hFE 2	4	-	-	-	VCE= 5V, IC= 0.5A
DC current gain 3	hFE 3	1.5	-	-	-	VCE= 5V, IC= 1A
Collector-emitter saturation voltage 1	VCE(sat) 1	-	-	0.3	V	IC= 0.2A, IB= 0.04A
Collector-emitter saturation voltage 2	VCE(sat) 2	-	-	1.5	V	IC= 0.5A, IB= 0.1A
Base-emitter saturation voltage	VBE(sat)	-	-	1.5	V	IC= 0.5A, IB= 0.1A
Rise time	tr	-	-	0.8	us	VCC= 400V, IC= 0.5A
Storage time	tstg	-	-	3	us	IB1= 0.1A, IB2= -0.2A
Fall time	tf	-	-	0.4	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 IC - VBE(on)  
at VCE= 5V, Ta= 25C

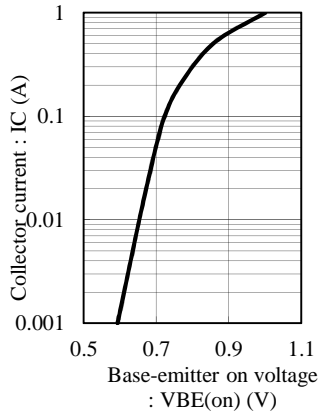


Fig.2 hFE - IC  
at VCE= 5V, Ta= 25C

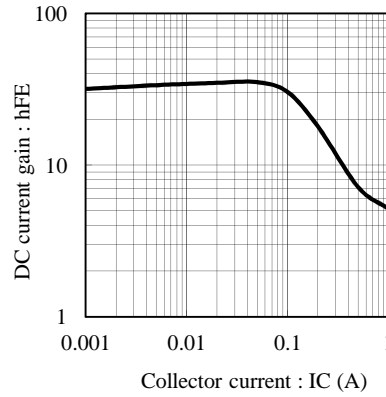


Fig.3 VCE(sat) - IC  
at IC/IB= 5, Ta= 25C

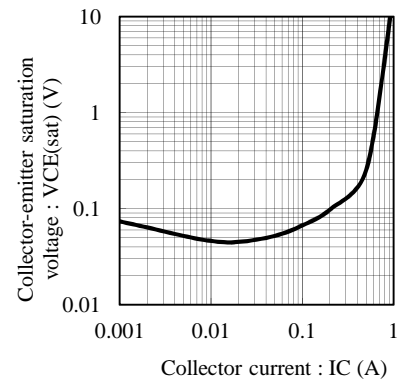


Fig.4 VBE(sat) - IC  
at IC/IB= 5, Ta= 25C

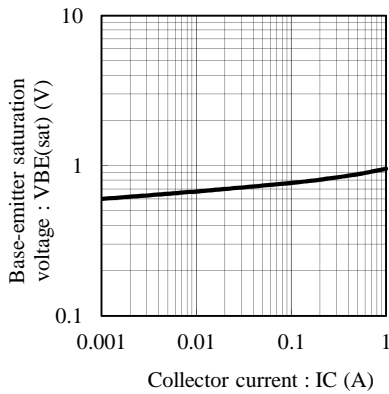


Fig.5 Cob - VCB  
at f= 1MHz, Ta= 25C

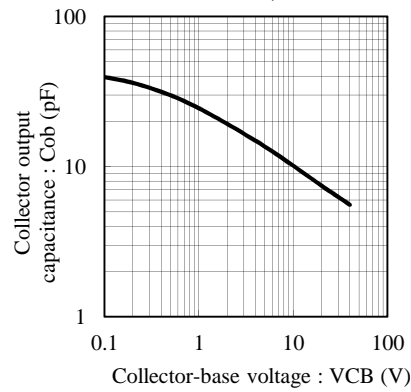


Fig.6 Cib-VEB  
at f= 1MHz, Ta= 25C

