

## Silicon PNP transistor epitaxial type 6B994

### [ Applications ]

General purpose transistors  
Medium power amplifire and switching

### [ Feature ]

Low collector saturation voltage  $V_{CE(sat)} = -0.45V(\text{Max.})$  at  $I_C/I_B = -500mA / -50mA$   
 Low collector saturation voltage  $V_{CE(sat)} = -0.15V(\text{Typ.})$  at  $I_C/I_B = -500mA / -50mA$   
 Complimentary pair with phenitec P/N D5994

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

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-40	V
Collector-emitter voltage	VCEO	-32	V
Emitter-base voltage	VEBO	-5	V
Collector current	IC	-0.8	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	-40	-	-	V	$I_C = -50\mu A, I_E = 0A$
Collector-emitter breakdown voltage	BVCEO	-32	-	-	V	$I_C = -1mA, I_B = 0A$
Emitter-base breakdown voltage	BVEBO	-5	-	-	V	$I_E = -50\mu A, I_C = 0A$
Collector cut-off current	ICBO	-	-	-0.5	$\mu A$	$V_{CB} = -40V, I_E = 0A$
Emitter cut-off current	IEBO	-	-	-0.5	$\mu A$	$V_{EB} = -5V, I_E = 0A$
DC current gain	hFE	68	-	400	-	$V_{CE} = -3V, I_C = -100mA$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-0.15	-0.4	V	$I_C = -500mA, I_B = -50mA$
Transition frequency	fT	100	240	-	MHz	$V_{CE} = -10V, I_E = 50mA$
Collector output capacitance	Cob	-	12	25	pF	$V_{CB} = -10V, f = 1MHz, I_E = 0A$

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.

No. 6B994-20190904

Fig.1 hFE - IC  
at VCE= -3V, Ta= 25C

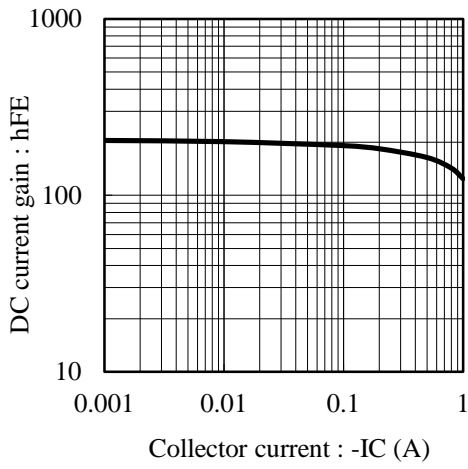


Fig.2 hFE - IC  
at VCE= -1V, Ta= 25C

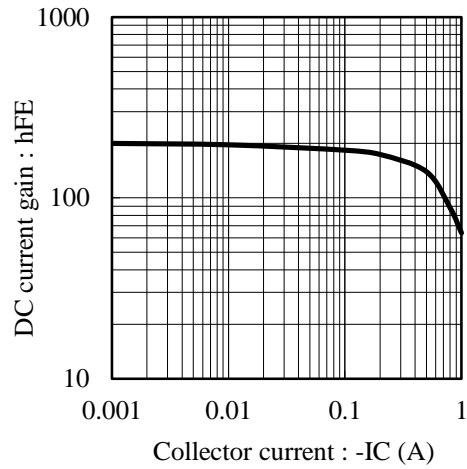


Fig.3 VCE(sat) - IC  
at IC/IB= 10, Ta= 25C

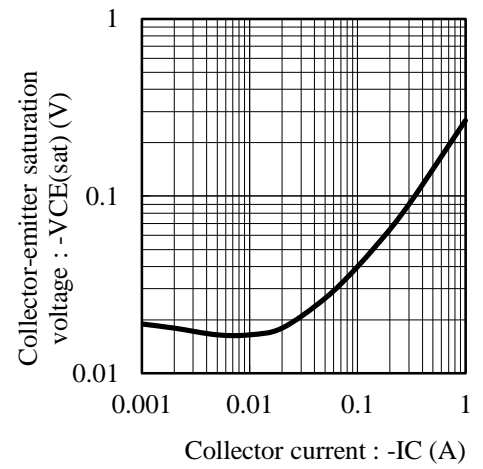


Fig.4 fT - IE  
at VCE= -10V, Ta= 25C

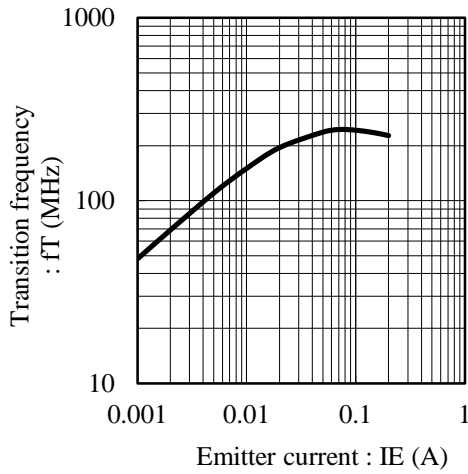


Fig.5 Cob - VCB  
at f= 1MHz, Ta= 25C

