

## Silicon PNP transistor epitaxial type B5897

### [ Applications ]

High side switches  
Medium power amplifier  
DC-DC converter

### [ Feature ]

Correspond to BCP69  
High collector current  $I_C = -1A$   
Small collector-emitter saturation voltage  $V_{CE(sat)} = -180mV(Typ.)$  at  $I_C = -1A, I_B = -100mA$   
Small output capacitance  $C_{ob} = 18pF(Typ.)$  at  $V_{CB} = -10V$

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

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-32	V
Collector-emitter voltage	VCEO	-20	V
Emitter-base voltage	VEBO	-5	V
Collector current (DC)	IC	-1	A
Collector current (Pulse)	ICP	-2	A
Base current (Pulse)	IBP	-200	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	-32	-	-	V	$I_C = -10\mu A, I_E = 0A$
Collector-emitter breakdown voltage	BVCEO	-20	-	-	V	$I_C = -1mA, I_B = 0A$
Emitter-base breakdown voltage	BVEBO	-5	-	-	V	$I_E = -10\mu A, I_C = 0A$
Collector cut-off current	ICBO	-	-	-100	nA	$V_{CB} = -25V, I_E = 0A$
Emitter cut-off current	IEBO	-	-	-100	nA	$V_{EB} = -5V, I_E = 0A$
DC current gain 1	hFE 1	50	-	-	-	$V_{CE} = -10V, I_C = -5mA$
DC current gain 2	hFE 2	85	175	375	-	$V_{CE} = -1V, I_C = -500mA$
DC current gain 3	hFE 3	60	-	-	-	$V_{CE} = -1V, I_C = -1A$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-180	-500	mV	$I_C = -1A, I_B = -100mA$
Base-emitter on voltage 1	$V_{BE(on)1}$	-	-	-700	mV	$V_{CE} = -10V, I_C = -5mA$
Base-emitter on voltage 2	$V_{BE(on)2}$	-	-	-1	V	$V_{CE} = -1V, I_C = -1A$
Transition frequency	fT	40	140	-	MHz	$V_{CE} = -5V, I_E = 50mA$
Collector output capacitance	Cob	-	18	-	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.

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

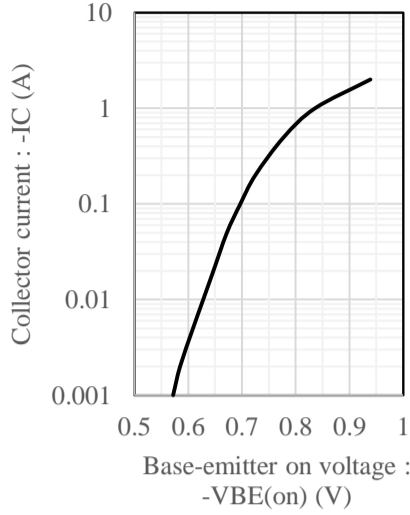


Fig.2 VBE(on) - IC  
at VCE= -10V, Ta= 25C

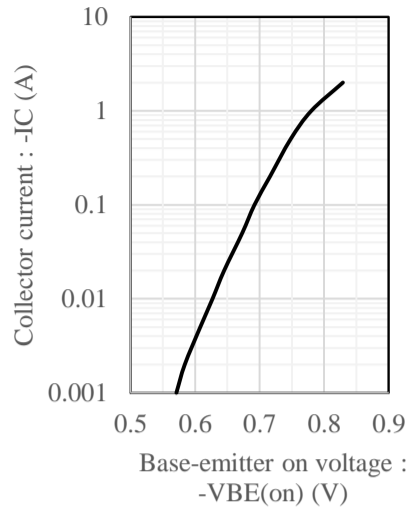


Fig.3 hFE - IC  
at VCE= -1V, Ta= 25C

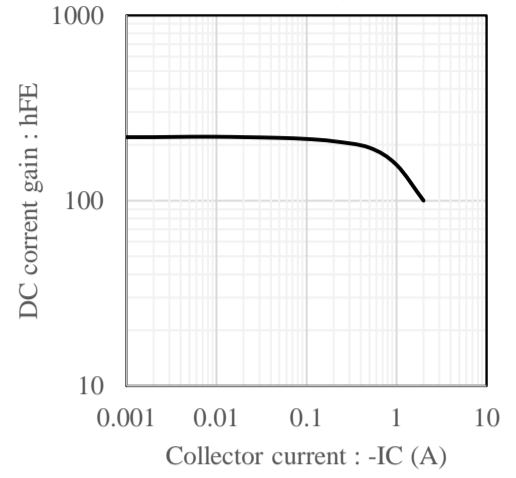


Fig.4 VCE(sat) - IC  
at IC/IB= 10, Ta= 25C

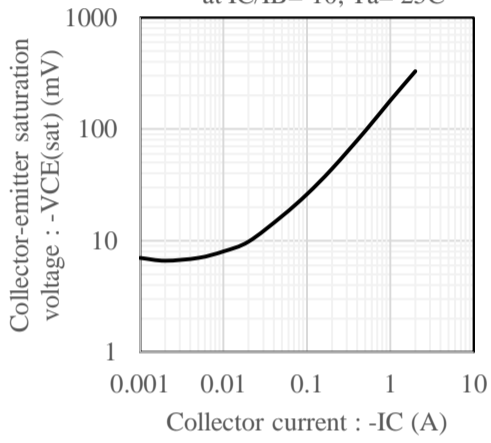


Fig.5 fT - IE  
at VCE= -5V, Ta= 25C

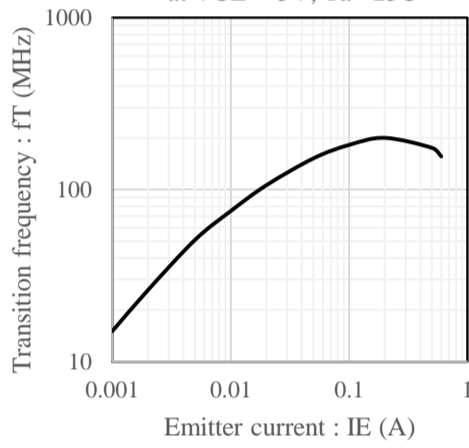


Fig.6 Cob - VCB  
at f= 1MHz, Ta= 25C

