

## Silicon PNP transistor epitaxial type B5947

### [ Applications ]

DC-DC converter, Strobo flash, Relay drive, Inverter drive  
with small VCE(sat) and high current

### [ Feature ]

High collector current

Low collector-emitter saturation voltage  $V_{CE(sat)} = -350\text{mV}(\text{Max.})$  at  $I_C = -4\text{A}$

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

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-30	V
Collector-emitter voltage	VCEO	-20	V
Emitter-base voltage	VEBO	-6	V
Collector current	IC	-5	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	-30	-	-	V	IC= -50uA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	-20	-	-	V	IC= -1mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	-6	-	-	V	IE= -50uA, IC= 0A
Collector cut-off current	ICBO	-	-	-0.5	uA	VCB= -20V, IE= 0A
Emitter cut-off current	IEBO	-	-	-0.5	uA	VEB= -5V, IE= 0A
DC current gain	hFE	82	-	390	-	VCE= -2V, IC= -500mA
Collector-emitter saturation voltage	VCE(sat)	-	-0.35	-1	V	IC= -4A, IB= -0.1A
Transition frequency	fT	-	120	-	MHz	VCE= -6V, IE= 50mA
Collector output capacitance	Cob	-	60	-	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.

No. B5947-20050920

Fig.1 VBE(on) - IC  
at VCE= -2V, Ta= 25C

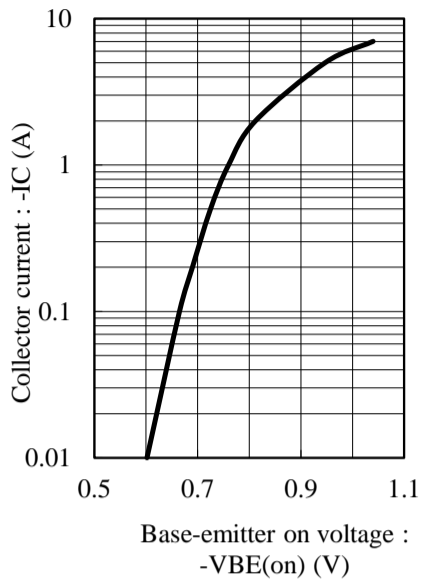


Fig.2 hFE - IC  
at VCE= -2V, Ta= 25C

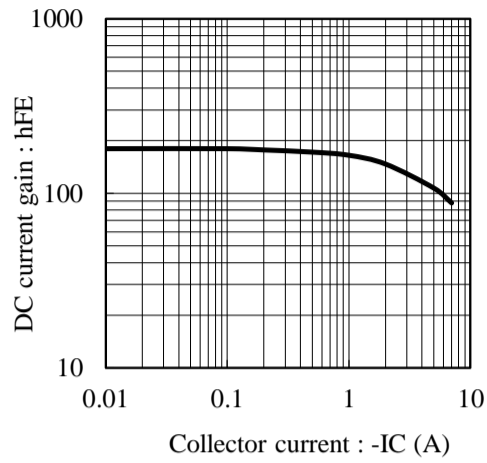


Fig.3 VCE(sat) - IC  
at IC/IB= 40, Ta= 25C

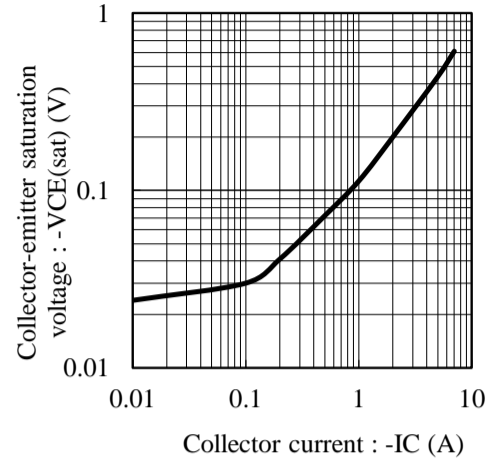


Fig.4 VBE(sat) - IC  
at IC/IB= 10, Ta= 25C

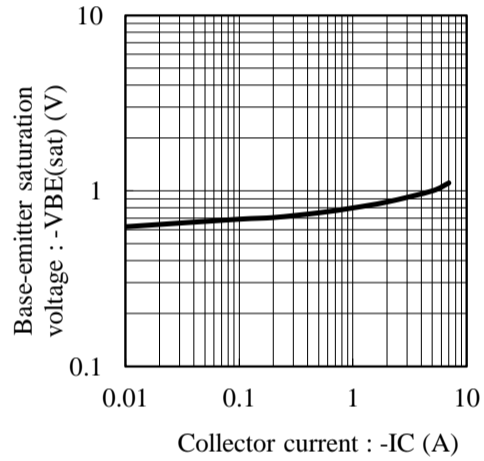


Fig.5 fT - IE  
at VCE= -6V, Ta= 25C

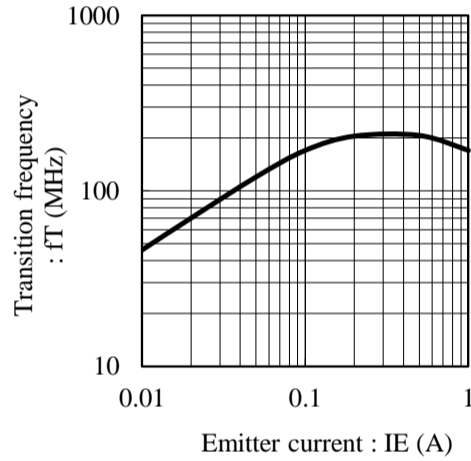


Fig.6 Cob - VCB  
at f= 1MHz, Ta= 25C

