

**Silicon PNP transistor epitaxial type
B5850**
[Applications]

General purpose transistors
Medium power amplifire and switching

[Feature]

High break-down voltage $BV_{CEO} = -80V$
 Low collector saturation voltage $V_{CE(sat)} = -0.14V(\text{Typ.})$ at $I_C = -500mA$, $I_B = -50mA$
 Small output capacitance $C_{ob} = 8pF(\text{Typ.})$ at $V_{CB} = -10V$, $f = 1MHz$
 Complimentary pair with D5850

[Absolute maximum ratings ($T_a = 25C$)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	V_{CBO}	-80	V
Collector-emitter voltage	V_{CEO}	-80	V
Emitter-base voltage	V_{EBO}	-8	V
Collector current	I_C	-1000	mA
Junction temperature	T_j	150	C
Storage temperature	T_{stg}	-55 to 150	C

[Electrical characteristics ($T_a = 25C$)]

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	-80	-	-	V	$I_C = -50uA$, $I_E = 0A$
Collector-emitter breakdown voltage	BV_{CEO}	-80	-	-	V	$I_C = -2mA$, $I_B = 0A$
Emitter-base breakdown voltage	BV_{EBO}	-8	-	-	V	$I_E = -50uA$, $I_C = 0A$
Collector cut-off current	I_{CBO}	-	-	-0.5	uA	$V_{CB} = -50V$, $I_E = 0A$
Emitter cut-off current	I_{EBO}	-	-	-0.5	uA	$V_{EB} = -8V$, $I_E = 0A$
DC current gain	h_{FE}	56	-	390	-	$V_{CE} = -10V$, $I_C = -150mA$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-0.14	-0.4	V	$I_C = -500mA$, $I_B = -50mA$
Transition frequency	f_T	-	180	-	MHz	$V_{CE} = -10V$, $I_E = 50mA$
Collector output capacitance	C_{ob}	-	8	20	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. B5850-20160808

Fig.1 IC - VBE(on)
at VCE= -10V, Ta= 25C

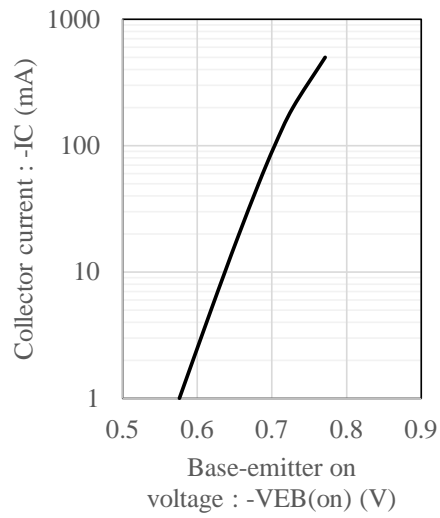


Fig.2 hFE - IC
at VCE= -10V, Ta= 25C

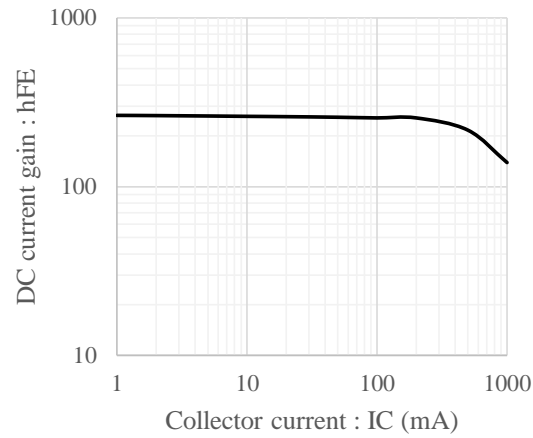


Fig.3 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

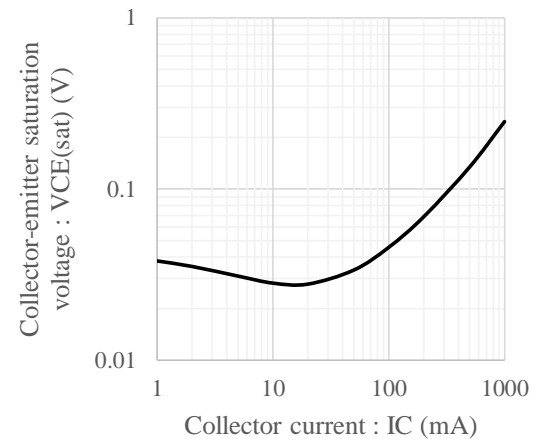


fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

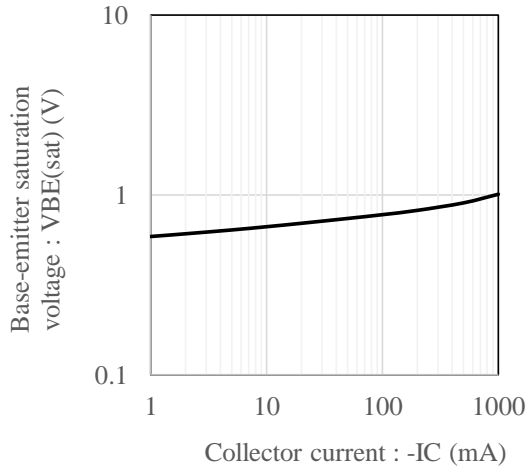


Fig.5 fT - IE
at VCE= -10V, Ta= 25C

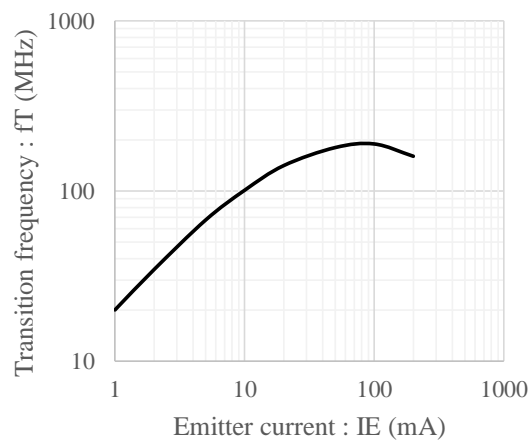


Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

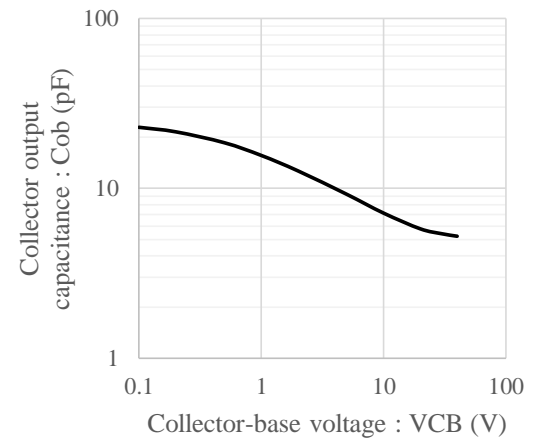


Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C

