

**Silicon PNP transistor epitaxial type
BP005**
[Applications]

General purpose

[Feature]

 Low collector saturation voltage $V_{CE(sat)} = -0.25V(\text{Max.})$ at $I_C = -100mA$, $I_B = -10mA$
[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-80	V
Collector-emitter voltage	VCEO	-80	V
Emitter-base voltage	VEBO	-4	V
Collector current	IC	-200	mA
Junction temperature	Tj	125	C
Storage temperature	Tstg	-55 to 125	C

[Electrical characteristics (Ta=25C)]

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	-80	-	-	V	$I_C = -100\mu A$, $I_E = 0A$
Collector-emitter breakdown voltage	BVCEO	-80	-	-	V	$I_C = -1mA$, $I_B = 0A$
Emitter-base breakdown voltage	BVEBO	-4	-	-	V	$I_E = -100\mu A$, $I_C = 0A$
Collector cutoff current	ICBO	-	-	-100	nA	$V_{CB} = -80V$
Collector cutoff current	ICEO	-	-	-100	nA	$V_{CE} = -60V$
DC current gain 1	hFE 1	100	-	-	-	$V_{CE} = -1V$, $I_C = -10mA$
DC current gain 2	hFE 2	100	-	-	-	$V_{CE} = -1V$, $I_C = -100mA$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	-0.25	V	$I_C = -100mA$, $I_B = -10mA$
Base-emitter on voltage	$V_{BE(on)}$	-	-	-1.2	V	$V_{CE} = -1V$, $I_C = -100mA$
Transition frequency	fT	50	-	-	MHz	$V_{CE} = -1V$, $I_E = 100mA$

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 $I_C - V_{BE(on)}$
at $V_{CE} = -1V, T_a = 25C$

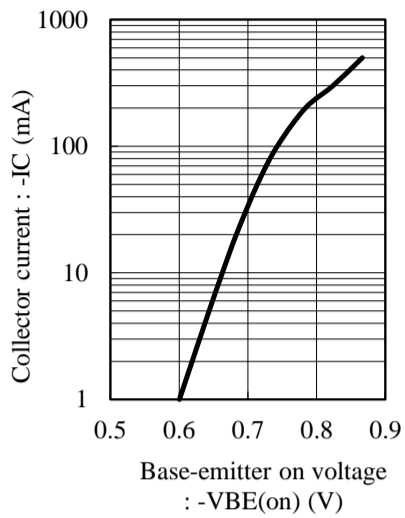


Fig.2 $h_{FE} - I_C$
at $V_{CE} = -1V, T_a = 25C$

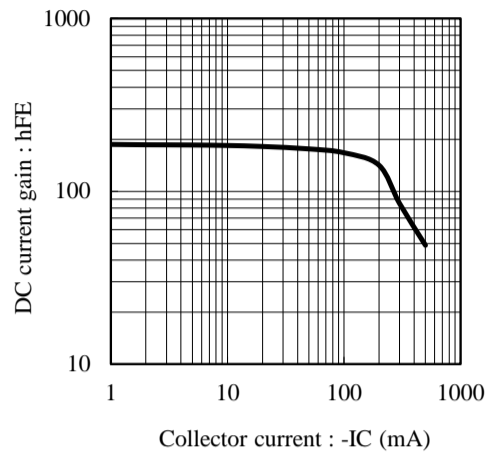


Fig.3 $V_{CE(sat)} - I_C$
at $I_C/I_B = 10, T_a = 25C$

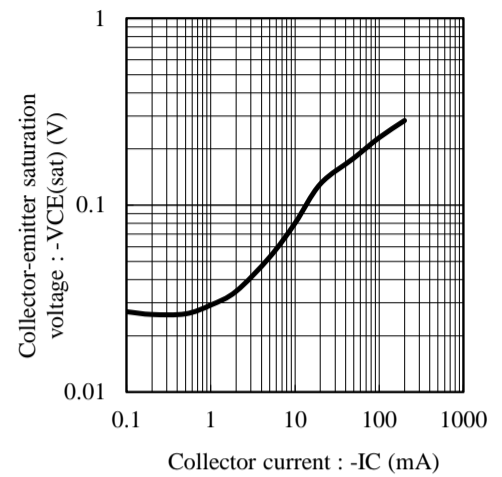


Fig.4 $V_{BE(sat)} - I_C$
at $I_C/I_B = 10, T_a = 25C$

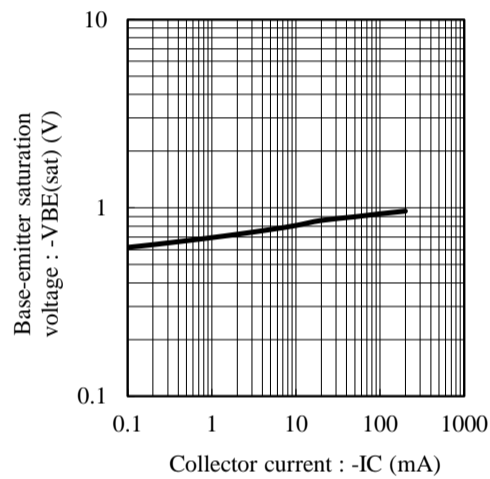


Fig.5 $f_T - I_E$
at $V_{CE} = -1V, T_a = 25C$

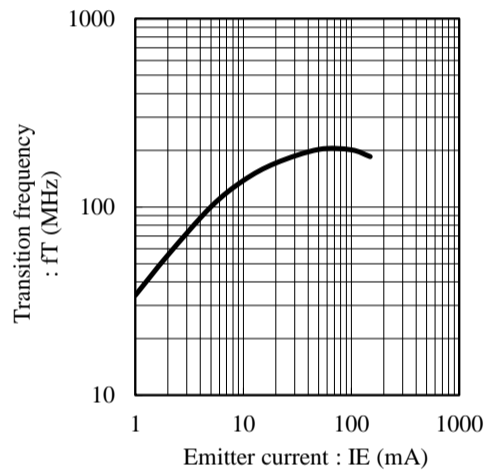


Fig.6 $C_{ob} - V_{CB}$
at $f = 1MHz, T_a = 25C$

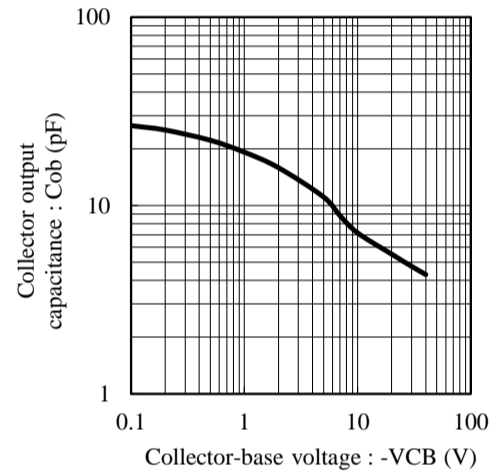


Fig.7 $C_{ib} - V_{EB}$
at $f = 1MHz, T_a = 25C$

