

**Silicon NPN transistor epitaxial type
DP868**

[Applications]

TV power supply

[Feature]

Low saturation voltage $V_{CE(sat)} = 0.4V$ (Max.) at $I_C = 0.5A$, $I_B = 20mA$
Good h_{FE} linearity

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

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	100	V
Collector-emitter voltage	VCEO	80	V
Emitter-base voltage	VEBO	5	V
Collector current (DC)	IC	1	A
Collector current (Pulse)	ICP	2	A
Junction temperature	Tj	150	C
Storage temperature	Tstg	-55 to 150	C

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

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	100	-	-	V	$I_C = 50\mu A$
Collector-emitter breakdown voltage	BVCEO	80	-	-	V	$I_C = 1mA$
Emitter-base breakdown voltage	BVEBO	5	-	-	V	$I_E = 50\mu A$
Collector cut-off current	ICBO	-	-	1	μA	$V_{CB} = 80V$
Emitter cut-off current	IEBO	-	-	1	μA	$V_{EB} = 4V$
DC current gain	h_{FE}	210	-	390	-	$V_{CE} = 3V$, $I_C = 0.5A$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.4	V	$I_C = 0.5A$, $I_B = 20mA$
Transition frequency	fT	-	140	-	MHz	$V_{CE} = 10V$, $I_E = -50mA$
Collector output capacitance	Cob	-	11	-	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 IC - VBE(on)
at VCE= 3V, Ta= 25C

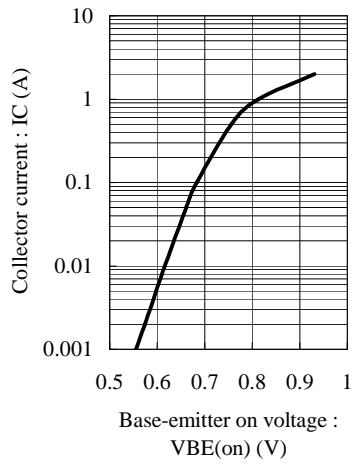


Fig.2 hFE - IC
at VCE= 3V, Ta= 25C

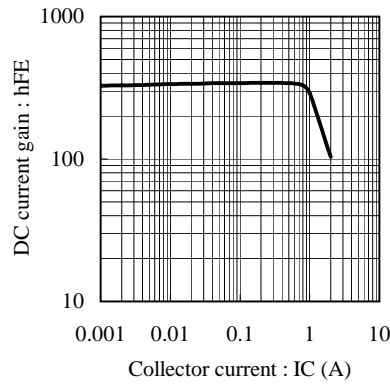


Fig.3 VCE(sat) - IC
at IC/IB= 25, Ta= 25C

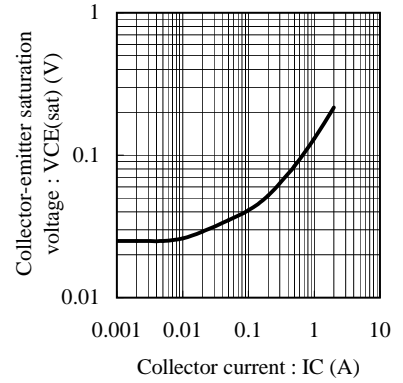


Fig.4 VBE(sat) - IC
at IC/IB= 10, Ta= 25C

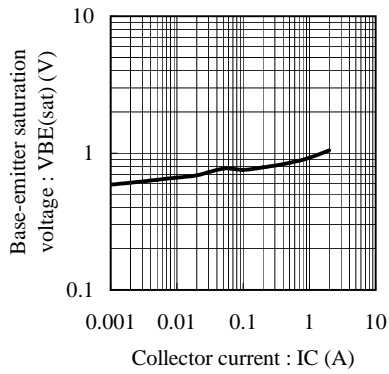


Fig.5 fT - IE
at VCE= 10V, Ta= 25C

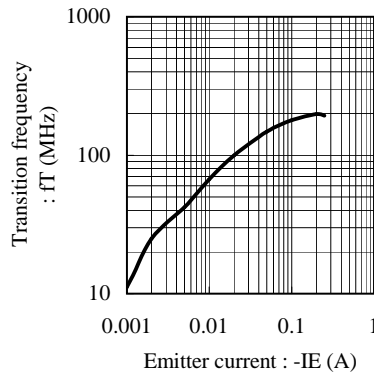


Fig.6 Cob - VCB
at f= 1MHz, Ta= 25C

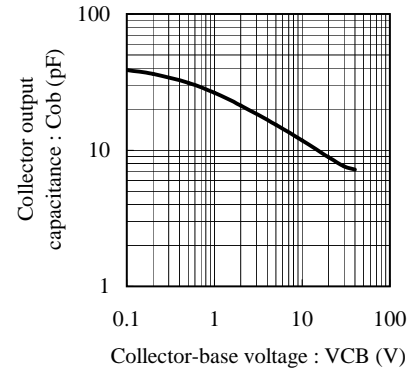


Fig.7 Cib - VEB
at f= 1MHz, Ta= 25C

